Michigan IT Strategic Plan

From Vision

To Action

2008-2012

Michigan.gov

"Information technology is playing
a critical role in every aspect of our work.
Whether it's helping us work with local governments
and the private sector to improve efficiencies or
helping us create jobs through economic development
initiatives, information technology is at the heart
of Michigan's state government."

Jennifer M. Granholm, Governor

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STATE OF MICHIGAN
OFFICE OF THE GOVERNOR
LANSING

JENNIFER M. GRANHOLM
GOVERNOR

JOHN D. CHERRY, JR.
LT. GOVERNOR

We all know that Michigan's automobile industry made Michigan an industrial powerhouse and gave the world a wealth of new possibilities for how we live and work. Today Michigan is again emerging as a national leader in technology. From our Technology tri-corridor to our partnerships with cutting-edge high tech firms and our new and developing alternative energy industry – Michigan is at the forefront.

I'm proud that the State of Michigan is known across the nation as a leader among states for our dynamic and coordinated approach to information technology. As we grow our technology sector and transform and diversify Michigan's economy, we in state government choose to lead through our example.

In Michigan, IT helps us find ways to make government more efficient and to do more with less. We know that technology can be a tool to help connect agencies across bureaucratic lines – breaking down boundaries and making state government more responsive. And we know that technology can open new opportunities and new ways of performing our important work that better serve our citizens, all while maintaining the high-level of security and privacy they expect and deserve.

This 2008 iteration of Michigan's IT Strategic Plan builds on all that we have learned in the past and enhances our vision for the future. It also lays out how IT will enable us to build a better state government and fulfill our priority areas: jobs, education, communities, health care and better government.

I'm very proud of the work we in Michigan have done thus far in advancing Information Technology. But I'm even more excited by the promise of opportunities to come. In Michigan, we are truly moving from *Vision to Action*.

Sincerely,

Jennifer M. Granholm
Governor

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www.michigan.gov

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A Vision of Action

Executive Summary

Michigan's citizen- and business-centric vision drives the management and delivery of state IT resources. It focuses the Michigan Department of Information Technology on the specific tools and expertise needed for state government to provide solutions that meet and exceed expectations. The pages that follow detail how technology will help fulfill the promise of "A Connected Michigan."

Director Kenneth D. Theis
State of Michigan CIO

Vision for the Plan

This strategic plan lays out the future vision for technology in Michigan government...empowering our state and expanding government accessibility for our citizens and businesses statewide. From 2002 to 2007, government technology in Michigan was all about consolidation. Consolidating data centers, standardizing e-mail systems, sharing data across government agencies, vastly increasing the state's IT buying power...the list of victories goes on and on.

Looking forward into the remainder of 2008 and beyond, the story of IT in Michigan will shift away from consolidation and center on shared services and collaboration...maturing our IT organization around standard processes and methods, improved service and satisfaction.

We will foster and develop greater partnerships with local government and private partners across Michigan so that we can combine resources and transform government service. Working together, we will be able to expand services to rural areas that are currently underserved. We will unveil new online services making it even easier for citizens to do business with their government.

A top priority—and critical success factor in realizing our strategic goals—is fostering an exciting and thriving place for IT professionals to work and provide public service. This means equipping our employees with the right tools and training as well as challenging and leveraging their skills and abilities.

Never before has the state had so many key IT projects being readied for implementation. This includes a replacement of legacy systems for the administration of Michigan motor vehicles, an overhaul of the state's Medicaid system, a replacement of eligibility systems that will provide relief for the state's social workers and building a new Treasury tax system. Improved service will be realized through an IT management approach involving three integral components: technology, people and processes; a management approach that is used across the Michigan Department of Information Technology (MDIT) (See Fig. 1).

In the midst of improved service and collaboration, privacy and security of citizen data and personal information will remain paramount. Michigan citizens can rest assured that their government is doing everything possible to fight the evolving threats faced in computer security. This plan also places a greater focus on creating a more energy-efficient computer environment at the State.

Michigan's IT strategic plan is the map to the future as we work across traditional boundaries and improve government service for Michigan citizens.

Figure 1
IT Management in Michigan

Michigan's IT management approach incorporates people, processes and technology

A Vision of Action

Executive Summary

Building on a Strong Foundation

The 2001 Executive Order—consolidating IT in Michigan and creating the Michigan Department of Information Technology (MDIT)—centered on improving IT investments, standardizing information and data and enhancing the delivery of State services. It also mandated increased strategic technology infrastructure planning and the use of common technology across the executive branch.

Building on six years of consolidation and two statewide IT strategic plans, Michigan's IT organization is poised to move into the next phase of maturity. Not only meeting existing commitments, but also to begin addressing some of the historical structural challenges facing the state.

Aligning IT to Michigan's Needs and Plans

Michigan's IT strategic plan is developed with state agency goals and citizen priorities in mind and in light of best practices and the counsel of technology and business experts. Examples of activity over the last six months:

- Planning sessions and surveys with the Michigan Information Technology Executive Council (MITEC)—an advisory board of state department leaders
- Strategic planning retreats, discussions and surveys with Michigan's IT staff and leadership
- A survey of over 1,000 Michigan citizens on IT preferences and needs, conducted by Michigan State University
- Alignment of IT tools and solutions to statewide cabinet-level priorities, summarized in the table to the right and illustrated throughout the plan
- Discussions and feedback from leading IT researchers

Throughout the five-year planning cycle, regular updates and refinement will be made to the plan and progress will be reported to stakeholders. In these ways, Michigan's IT operations will enable and drive improved government service to Michigan's businesses and citizens. See Appendix A for more detail on the IT planning and governance approach.

Bridging the Gap

A comprehensive gap assessment—comparing baseline performance and functionality against future needs and requirements—completed Michigan's 2008-2012 IT action planning. The result was the creation of guiding policies and principles (detailed on page 6) that drive and integrate goals, strategies and initiatives; guiding both the IT strategic direction, as well as the plan implementation.

Policies and principles factor in social, economic and demographic changes, as well as public policies, consumer and citizen needs, agency business requirements, available and emerging business models and technology. These factors were measured against requirements for the immediate (less than two years) and intermediate (two to five years) future. More details on the gap analysis for this planning cycle are provided in Appendix A and Appendix N.

"We must guide our state from one era to another - all the while preserving a way of life that has always defined Michigan.
Hard work.
Strong families.
Proud communities.
And most of all, good jobs.

Governor Jennifer Granholm - State of the State Address - January 29, 2008

State of Michigan Cabinet Action Plan

Education
Preparing All Students for Success

The Economy
Alternative Energy & Economic Development

Communities
Protecting Our Families & Our Quality of Life

Health & Human Services
Making Health Care Affordable & Accessible

Better Government
Making Government More Cost Effective & Efficient

Look for these icons throughout the plan to see how IT aligns to Michigan's cabinet-level goals and priorities

A Vision of Action

Executive Summary

Guiding Policies and Principles: 2008-2012

A set of guiding principles—developed with and for IT stakeholders across Michigan—drove the development of Michigan's 2008-2012 goals, strategies and initiatives. They are as follows:

- Effective and Efficient Customer-Based Operations and Services
- Performance, Accountability and Public Value
- Privacy, Security and Public Trust
- High Performance Worker and Workplace
- Agile Management and Infrastructure
- Shared Solutions, Standards and Flexible, Open Boundaries
- Maturation and Modernization of Solutions
- Innovation and Transformation

A strategy and transformation map, and detailed information on each principle, is provided on page 24. This reviews how the guiding principles drive or enable each goal area and reviews plans for implementation.

Goals, Strategies and Initiatives

Based upon the results of the planning process, the goal foundation of Michigan's 2004 and 2006 plans has been enhanced to meet identified challenges and opportunities. Selected strategies and initiatives in each of the goals have been strengthened and restructured and a new transformational goal (Goal 6) has been added. The primary shifts in goal structure and content since the last plan are provided in Appendix N. An overview of each of the 2008-2012 goal areas, and representative activities planned, are provided in the next section of this plan, called "Action."

The Funding Imperative

Together with the agencies, MDIT forecasts and tracks IT-related budget items throughout the fiscal year. In partnership with the agencies, MDIT is optimizing business value for Michigan citizens; ensuring that taxpayer dollars spent on technology today produce an optimum return on investment (ROI) tomorrow, creating new cost savings for client agencies.

By striving for a precise balance of internal and customer-directed investments, Michigan's enterprise IT portfolio governance and management model has increased IT productivity, organizational agility and better assures desired outcomes. Looking ahead to the 2010 budget cycle, MDIT is developing ways to further enhance the budget-planning process and exploring an enterprise-funding model for IT projects across the agencies.

Action

Our Mission:
Transforming the way government operates—delivering innovative information technology solutions with excellence and integrity

Michigan's IT Goals: 2008-2012

Goal 1	Access: Expand Michigan's services to reach citizens and businesses anytime, anywhere *Citizens and agencies alike cite the need for simpler and streamlined access points to government services*
Goal 2	Service: Deliver efficient and effective technology services and shared solutions to the agencies *Meeting and exceeding client expectations*
Goal 3	IT Management and Infrastructure: Improving operations, security and reliability through statewide solutions and universal standards *Enabling even more dependable, agile and leading-edge IT operations across state government*
Goal 4	Great Workplace: Support a high-performance workforce *Attracting and retaining the best technology talent*
Goal 5	Cross-boundary Solutions: Foster partnerships across and beyond state government *Using technology as a change agent for cross-boundary innovation*
Goal 6	Innovation and Transformation: Drive innovative processes and technologies to transform Michigan's government service *Rethinking technology and processes; challenging the status quo*

Goal One: Access

Expand Michigan's services to reach citizens and businesses anytime, anywhere

Goal one is about providing opportunities for anyone, anywhere, to utilize our services and information resources. Improving access means increasing our technical capabilities, expanding the number of online services and managing information to enhance our presence in existing online communities. It also means engaging citizens in decision-making and delivering these services in a manner that protects the privacy and security of every citizen.

Goal One

Strategies

Provide Michigan citizens and businesses with one simple access point to government services

Optimize technology to transform how government offers services

Progress to Date

MiDrive (www.michigan.gov/drive)

- ✓ Launched in May 2007, the MiDrive Web site directly interfaces with the Intelligent Transportation Center and provides information on lane closures and construction projects
- ✓ Provides real-time functionality, mapping of traffic accidents and current speeds in Detroit and Grand Rapids
- ✓ By Jan 2008 nearly 200,000 hits and 71,000 visits registered

MiSWIM System

- ✓ Gives the public access to water quality information, including E. coli bacteria, fish stocking and more

Michigan.gov (ADA Compliant)

- ✓ Over 38 million page views monthly (330,000 from Mobile/PDAs)
- ✓ Monthly downloads: 8 million PDFs and 300,000 RSS
- ✓ 300 highly-used e-services, from tax filing to plate renewal
- ✓ Recognized nationally for citizen service: National Policy Research Council: A+; Center for Digital Government: "Best of the Web;" Government Technology Magazine, Digital States Survey: #1 State in the nation; Brown University: #2 State in the nation

Michigan Today: Fishing Licenses On-the-Go

On a recent fishing trip, Bill Schrantz was traveling to the boat dock of a charter fishing boat and found himself lost somewhere in western Michigan. Using his cell phone he connected to the Michigan GIS Harbor Reservation System and navigated to the dock. Once there, Bill realized he had forgotten to get a fishing license. At 6 a.m. not many bait shops are open, so his trip was in peril of complete ruin. The charter boat captain explained to Bill that he could connect to the state of Michigan's mobile services site via his cell phone. In minutes, he was licensed and ready for a great day of fishing.

Proof Positive

Connecting the Goal to Action

Strategies & Initiatives for Access - Goal One*

Goal One

Strategies

Provide Michigan citizens and businesses with one simple access point to government services

Optimize technology to transform how government offers services

Initiatives in Motion

More Services via Self-Service Kiosk

- In addition to improving access to government services, Michigan's self-service kiosks improve efficiency
- Based on high popularity of these ATM-style machines—currently providing vehicle registration, title renewals and license plate tab printing—new services have been proposed for implementation, including: parking/speeding and other bill/ticket payments, searchable directories and HR/job application services, as well as local government functionality

Text-Messaging Subscription Service

- Automatic text-messaging services via cell phone/PDA will be accessible via Michigan.gov; alerting users on items such as traffic congestion, lottery results or DNR license deadlines

MI Integrated Tax Administration System (MIITAS)

- MIITAS will improve tax processing and administration
- It will enable increased collection rates; provide the ability to adapt to changes and additions to tax laws; increase voluntary compliance of taxpayers and increase self-service and electronic filing, refunding and payment options

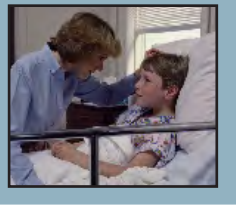
Guided by the needs of agencies as well as the citizens and businesses we serve...

Enabling Access: Tools & Solutions

- Citizen interaction/Web 2.0/social computing
- Improved search functionality
- Government accountability Web site
- Citizen self-service kiosks
- Real-time traffic mapping
- Automatic text-message alerts
- Integrated data capability
- Accommodate consumerization of IT

Michigan Tomorrow: Better Health Care for Michigan Families

While on vacation at the Lake Superior Shores, eight-year-old Jack Simlar met with an emergency case of appendicitis. In the future, a verbal query for local hospitals through their vehicle would result in a detailed map and driving directions to the closest hospital and quickest route. In the fifteen minutes it would take to rush him to the Marquette General Hospital, the family doctor could electronically transfer his detailed medical history along with their insurance information. This virtual admitting process would allow Jack to be rushed directly into an exam room upon arrival. Information about his medical condition and special dietary needs could then be transmitted to his school, so both the school nurse and dietician could build a healthy menu of lunch choices for Jack.



*Appendix Resources: *Initiatives - B • Targets & Metrics - C • Associated Technologies - D*

A Look Ahead

Goal Two: Service

Deliver efficient and effective technology services and shared solutions to agencies

Providing service to our agency partners is critical for Michigan's Department of Information Technology. Meeting and exceeding client expectations is accomplished through actively listening and responding to customer needs, as well as proactively offering opportunities to share resources, increase government efficiency and improve workflows.

Goal Two

Strategies

Create efficiencies for our agencies in support of their existing systems

Improve quality of service and enhance accountability to our customers

Maximize the value of IT investments

Progress to Date

Medicaid Management Information System Upgrade (CHAMPS)

- ✓ The implementation of CHAMPS is accelerating payment on claims needing correction, reducing the volume of paperwork for providers and state Medicaid staff and improving the accessibility of information to Medicaid providers
- ✓ With the new system, Medicaid providers can use a Web tool to apply to become a new provider, update records, submit and correct their Medicaid claims online

FieldManager Construction Management Software

- ✓ Built FieldManager, computerizing $1.5 billion road/bridge/airport/railroad program
- ✓ Saves over $28.5 million/year in reduced hands-on time and streamlined operations across the state

Agency Operations Partnership Team (A-OPT)

- ✓ A new, hands-on subcommittee of the Michigan IT Executive Council, A-OPT is improving operations and allowing MDIT to better meet customer needs

Federally Funded "Direct Certification"

- ✓ DHS food stamp and MDE student record data sharing is enabling automatic student qualification for free/reduced breakfast and lunch

Michigan Today: Smooth Move with the DMVA

When the Department of Military and Veterans Affairs (DMVA) completed their recent move, IT functionality became the least of their worries. "If only unpacking the boxes were as easy," said Hubert B. Hess, chief of staff with the Veterans Affairs Directorate, thanking MDIT's David Roach for his "superb" service. "Downtime was at a minimum and our staff was back to normal computer and telephone use in short order." He praised the planning, oversight and execution that took place. "From the perspective of the user, the move simply worked," said an appreciative Hess.

Proof Positive

Connecting the Goal to Action

Representative Initiatives for Goal Two*

Goal Two

Strategies

Create efficiencies for our agencies in support of their existing systems

Improve quality of service and enhance accountability to our customers

Maximize the value of IT investments

Initiatives in Motion

Modernization of Existing Systems

- Replacing legacy systems for the administration of Michigan motor vehicles, overhauling the state's Medicaid system, replacing eligibility systems that provide relief for the state's social workers and building a new Treasury tax system

Operational Efficiency

- Automating and standardizing tools, providing resource planning and tracking tools, formal configuration management and improved separation of duties

Shared Services

- Creating new service centers or shared applications when there are intersections across agencies and developing technology-specific competency centers

State Unified Information Technology Environment (SUITE)

- Implementing project management offices and project management methodology; creating project control offices under each information officer; utilizing a consistent software engineering model and process management across the State

Portfolio Management

- In addition to an annual call for projects, strategies to better manage demand will be put into place, providing better budget impact planning for agencies on new and existing IT investments

Our goals must be actionable and balance aggressive drive with realistic expectations.
Kenneth D. Theis, State of Michigan CIO

Enabling Service: Tools & Solutions

- Shared resources and services
- Workflow and supply chain management
- Mobile worker and telework
- Business intelligence: Data, information sharing and management
- Open source software
- Call center consolidation

Michigan Tomorrow: Streamlining Government Interactions

The Jackson Dairy Supply is a recognized leader among Michigan milk producers. While producing quality milk is second nature to the family, navigating government bureaucracy is not. When the family decided to surprise Grandpa Jackson with the opening of his own ice cream shop, they needed to move quickly. In the Michigan of tomorrow they would benefit from a Web portal and obtain a standardized license, create a "business user account" and electronically file all correspondence and tax payments. This same account would interface with the county health department and quickly distribute all updates to all government entities. The result: within days, applications could be filed and approved and "The Jackson Family Scoop" could open in time for the big surprise.

*Appendix Resources: *Initiatives - B* • *Targets & Metrics - C* • *Associated Technologies - D*

A Look Ahead

Goal Three: Management and Infrastructure

Improving operations, security and reliability through statewide solutions and universal standards

Today, it is more important than ever to be responsible stewards of our limited resources. Delivering projects is no longer enough. Over the next five years, we will work to enable even more dependable, agile and leading-edge IT operations across state government. We will continue to refine our standards and architecture, reinforce our infrastructure and protect our physical and information resources.

Goal Three

Strategies

Standards and architecture: Continue evolving Michigan's technology standards and architecture to reinforce robust forward-moving operations

Infrastructure: Utilize best practices in the management of IT assets, including hardware, software, data, systems and applications

Protection: Provide optimal levels of security and citizen privacy

Progress to Date

Statewide Architecture Standards and Services

- ✓ Published statewide architecture plan, providing a technology direction for agencies, MDIT and vendors that is easy to follow and see
- ✓ Technology phase-out, phase-in plan (lifecycle roadmap), updated biannually
- ✓ Weekly solution workshops, providing assistance from Enterprise Architecture (EA) Core Team architects; agency and infrastructure service experts; data center, telecom and enterprise security engineers

Data Centers

- ✓ Closed and consolidated 29 server rooms to date
- ✓ Freeing nearly 30,000 sq. ft.; moving/eliminating some 1,000 servers

Depot Facilities

- ✓ Consolidated 3 locations into 1 warehouse
- ✓ Wireless network capability with streamlined order fulfillment

Payment Card Industry (PCI) Compliance

- ✓ One of the first states in the nation in compliance with this federal standard
- ✓ Reducing the threat of credit fraud, hacking and other security vulnerabilities

Lab Case Management System (LCMS)

- ✓ First statewide system providing information sharing and allowing MSP to maintain laboratory accreditation

Michigan Today: Desktop Migration at the School for the Deaf

When Cecelia A. Winkler, principal of the Michigan School for the Deaf learned that all of her computer systems would go through the Michigan/1 conversion, she was concerned. Employees range in IT knowledge and some only speak through American Sign Language. In an e-mail thanking MDIT, Winkler said "Ultimately they made sure that ALL staff had a voice and were included. They changed/tweaked and rewrote ways of handling situations so that elementary, middle and high school kids had equal access...We honestly felt they were working with us and for us and not coming in to drag us into the new system."

Proof Positive

Connecting the Goal to Action

Representative Initiatives for Goal Three*

Goal Three

Strategies

Standards and architecture: Continue evolving Michigan's technology standards and architecture to reinforce robust, forward-moving operations

Infrastructure: Utilize best practices in the management of IT assets, including hardware, software, data, systems and applications

Protection: Provide optimal levels of security and citizen privacy

Initiatives in Motion

Information Architecture

- Over the next three years, Michigan will be formalizing data sharing across state agencies to reduce error rates, empower fraud detection and improve customer service
- A center for integrated technologies will organize efforts and deliver on agency needs using common tools, people and services

Michigan/1 Desktop Migration

- Continuing consolidation of 19 computing environments into a standard framework
- Reducing costs and improving agency service by streamlining the systems supporting basic computing functions, like directory services, file and print and desktop environments

Greening of Michigan's IT

- In addition to data center consolidation, other power consumption reductions are taking place: optimization of hot and cold aisle arrangements, increased virtualization and maximizing expected dormancy cycles of servers and equipment
- Applying green IT criteria within procurement of technology, as well as recycling, from copper used within telecom to re-deployment of equipment with an automated asset recovery program

Critical Information Security Upgrade (CISU)

- This partnership between security and telecom teams is providing greater protection of vital files and data and keeping critical systems available to qualified users
- Through 24 initiatives, more stringent safeguards against malicious/unauthorized traffic and enterprise hardware/software system reconfiguration and upgrades are in motion

Improving Management and Infrastructure: Tools & Solutions

- Statewide standards and architecture
- Web platform and Web-oriented architecture
- Alternative acquisition and delivery models
- Asset management
- Improved cost structure
- Geographic information systems, mashups and composite applications
- Identity management
- Implementing energy-saving measures

Michigan Tomorrow: Preparing Our Students for Success

Inez Gonzales dreamed of helping people, but as a teenage mother, she faced significant barriers. She had taken courses off and on throughout the years, but had never completed a degree. With tomorrow's technology, a unique identifier code would follow her from kindergarten and her counselor would be able to easily determine the coursework necessary for completion. Inez would be able to receive her professional license as a laboratory technician online, since her electronic application would include this code and the State could verify her credentials automatically. The Michigan licensing system could also notify Inez when her renewal and continuing education credits would be due.

*Appendix Resources: *Initiatives - B • Targets & Metrics - C • Associated Technologies - D*

A Look Ahead

Goal Four: Great Workplace

Support a high-performance workforce

Government technology is a rapidly-changing landscape. To succeed in serving our agency partners and our customers, we must attract and retain the best technology talent by consistently striving to provide an engaging and stimulating workplace. This includes not only offering employees meaningful work, professional development and expanding career potential, but also pride and a commitment to the work they do.

Goal Four

Strategies

Workforce: Recruit, retain and recognize a diverse, high-performing technology workforce

Workplace: Establish standards and procedures requiring and equipping a high-performance workforce

Workforce development: Support, enable and help drive Michigan's IT plan goals and strategies through our IT workforce

Vision and Values: Support a culture where employees take pride and responsibility for delivering exceptional service

Progress to Date

Great Workplace IT Action Campaign

- ✓ Campaign to create an even better workplace and empower Michigan's IT workforce is underway

Awareness Sessions Underway

- ✓ Over 1,000 employees have participated in awareness sessions to implement the new SUITE program, providing them with the skills necessary to implement this new project development methodology
- ✓ Over 1,000 employees participated in Enterprise Architecture awareness and usage sessions to date

Leadership Development Programs

- ✓ 63 new leaders participated in the New Leadership Development Program, launched in 2006 adding value to leadership transition
- ✓ 47 employees participated in the Informal Leadership Program. providing immediate application of skills to current roles

Participate in Annual MI-360 Evaluation

- ✓ Managers and employees take part in the annual MI-360 feedback program

Michigan Today: MI-360 Evaluation

On an annual basis, MDIT managers get feedback from peers, employees and supervisors as part of their performance evaluations. The MI-360 program allows employees to give and receive feedback and make improvements. To encourage a candid and unguarded exchange, responses go directly to the Office of Great Workplace Development and remain anonymous. "Some things I had overlooked or not even considered were brought to my attention through this process," said one manager. "It was humbling. I've already made some changes and am seeing tremendous results."

Proof Positive

Connecting the Goal to Action

Representative Initiatives for Goal Four*

Goal Four

Strategies

Workforce: Recruit, retain and recognize a diverse, high-performing technology workforce

Workplace: Establish standards and procedures requiring and equipping a high-performance workforce

Workforce development: Support, enable and help drive Michigan's IT plan goals and strategies through our IT workforce

Vision and Values: Support a culture where employees take pride and responsibility for delivering exceptional service

Initiatives in Motion

Human Capital Management and Service

- Enhancing HR programs and processes for a more effective, engaged workforce by addressing professional development and job alignment with skills and interests

Great Workplace IT Action Campaign

- Establishing a long-term, department-wide, effort to make MDIT an even better place to work and empower employees; creating an action team of frontline IT staff to identify and prioritize issues/needs, suggest, implement and measure solutions

Leader and Employee Development

- Cultivating customized professional development for informal, new, established, strategic and executive leaders
- Developing young talent by reaching out to establishments of higher education to recruit students and creating specialized opportunities for current MDIT students

Succession Planning

- Identifying trends and projections for employee departure for continuity of operations and working with program areas to help develop plans to meet future needs

Vision and Values Initiative

- Coordinating with the Governor's Values Awareness, Alignment and Performance Management initiative; providing guidance in aligning employee values, interests and skills with statewide vision and values

You can never get employees to treat customers better than they are being treated themselves...James Autry

Enabling a Great Workplace: Tools & Solutions

- Succession and workforce planning
- Modernization of classification systems
- Personal productivity tools
- Group and social shared-solution tools

Michigan Tomorrow: Making Government More Cost-effective and Efficient

Colton Clark, fresh out of technical school, was attracted to employment with the Michigan Department of Information Technology (MDIT). He knew of the fast-paced and exciting environment, the excellent training programs and the potential for career advancement. After joining MDIT, Colton received technical and customer-service training during his first six months, established an ongoing training schedule and set his long-term career goals. This employee of tomorrow would be provided with tools he needed to work directly from the field or from his vehicle. And when issues like building power outages would occur, Colton, working with a team, would be able to quickly bring the systems back up, working alongside employees in the field. As a young IT professional, Colton would be engaged and stay with the department for the long term.

*Appendix Resources: *Initiatives - B • Targets & Metrics - C • Associated Technologies - D*

A Look Ahead

Goal Five: Cross-boundary Solutions

Foster partnerships across and beyond state government

Michigan is fully engaged in using technology as a change agent for cross-boundary innovation. Whether through a local and state cross-boundary technology steering committee, a network of health care professionals, or a group of vendor partners, we are identifying and solving difficult issues across organizations. We will continue to expand this network of partners and identify new initiatives that will aid the State of Michigan and our partners in delivering better services to customers and citizens.

Goal Five

Strategies

Public partnerships: Create innovative partnership programs for more effective and efficient government across all levels

Public/private partnerships: Strengthen and expand partnerships beyond government to the private sector and higher education

Technology: Leverage existing and emerging IT infrastructure and functionality across the state

Health IT: Expand health information technology and health information exchange programs and partners

Progress to Date

Local/State Cross-boundary IT Steering Committee

- ✓ Formed in 2007, this committee of local and state government IT officials is co-chaired by executives from local units of government

Working with universities to bring locals online

- ✓ 74 Web sites developed for local governments to date
- ✓ Template for local government site development and site assessment created

Michigan Public Safety Communications System (MPSCS)

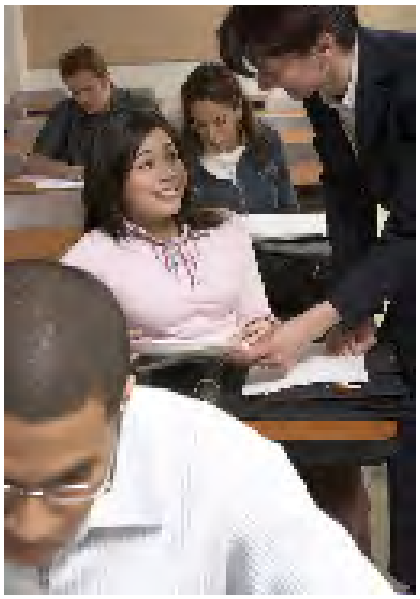
- ✓ Over 40,000 first responders rely on MPSCS, up from 10,000 in 2002
- ✓ Usage is up 315% to 8.3 million per month—84% are locals
- ✓ 988 multi-jurisdictional events used MPSCS last year

Federal Funding Bringing Broadband to Rural Health Care Facilities

- ✓ Secured $20.9 million award from the Federal Communications Commission: This will fund the sharing of MRI's and other medical information between 300-400 rural hospitals and clinics through broadband

Statewide Leadership Advocacy

- ✓ First state to win this Health Information Management Systems Society award



Michigan Today: Web sites for Local Government

Sandra Poindexter, professor of computer information systems at Northern Michigan University is a key partner in MDIT's effort to bolster local government Web site availability. Her students are among those who assist local governments with site development—over 74 Web sites have been developed to date. "Using real world projects within an academic course is a win-win," said Poindexter. "Students are more motivated to learn, committed to project outcomes and get practical experience that clarifies the concepts." Thanks to the student templates, officials can also create sites independently.

Proof Positive

Connecting the Goal to Action

Representative Initiatives for Goal Five*

Goal Five

Strategies

Public partnerships: Create innovative partnership programs for more effective and efficient government across all levels

Public/private partnerships: Strengthen and expand partnerships beyond government to the private sector and higher education

Technology: Leverage existing and emerging IT infrastructure and functionality across the state

Health IT: Expand health information technology and health information exchange programs and partners

Initiatives in Motion

Local/State Cross-boundary IT Steering Committee

- Leveraging innovative collaborative technology solutions to transform, broaden and enhance Michigan government service offerings
- Building things once, sharing resources and eliminating duplication, this committee is seeking cost savings and optimization of services

Broadband in Michigan

- In partnership with the Governor, MDIT is working to expand traditional broadband services
- Increasing awareness and adoption of existing services, and educating leaders about its value in improving tourism, education, health care, public safety, government services and economic development; working with multiple counties and associations to help address the need and desire to expand traditional broadband coverage

Mi Public Safety Communications System (MPSCS)

- Providing radio service to State troopers, conservation officers and over 1,200 local, county, state and federal public safety personnel with 97% coverage across the state (See Appendix M)
- Working to enhance interoperability to all first responders, MPSCS will add new jurisdictions, including Washtenaw County in 2009

Michigan Health Information Network (MiHIN)

- Using IT to drive quality and efficiency in health care, MDIT is working with the Department of Community Health and others to accelerate use of health IT and information exchanges
- A conduit to care report, developed with 200 healthcare stakeholders, established nine medical trading areas; the MiHIN Resource Center provides ongoing guidance, direction, and coordination

Bridging boundaries...connecting Michigan with IT solutions...

Enabling Cross-boundary: Tools & Solutions

- Shared governance, infrastructure and services
- Cross-boundary standards and architecture
- Public-private partnerships
- Health information exchanges

Michigan Tomorrow: Protecting Communities and Quality of Life

In the future, virtual maps of available tax-reverted properties will help cities like Detroit meet the needs of out-of-state research and development firms, and bolster local economies. The multi-jurisdictional maps and online photos would help new companies finance contiguous lots owned by the county, city and state. This same developer would be able to identify all existing infrastructure, including power, broadband and sewer. The firm could work with the State of Michigan to identify required workforce skill sets. Michigan's No Worker Left Behind program would respond by providing opportunities for displaced workers to gain the necessary skills needed to begin employment with the firm.

*Appendix Resources: *Initiatives - B • Targets & Metrics - C • Associated Technologies - D*

A Look Ahead

Goal Six: Innovation and Transformation

Drive innovative processes and technologies to transform government service

Together with our agency partners, we are rethinking technology and processes; challenging the status quo. In collaboration with the public and private sector, we will make both small- and large-scale modifications and improve the way that services are delivered and the type of services possible and available. This effort will drive a systematic approach to innovation and transformation.

Goal Six

Strategies

People: Fully realize customer needs and build a culture supporting change, innovation and excellence among employees and partners

Processes: Develop governance, change and portfolio management processes and standards to support, enable and drive the transformation of existing, and the development of new services

Technology: Employ best practices to improve government services through information, communications and technology

Progress to Date

Strengths/Weaknesses/Opportunities/Threats (SWOT) Assessment

- ✓ Conducted SWOT analysis with the Michigan IT Executive Council (MITEC), as well as with IT employees across various units of the department; conducted survey of over 1,000 Michigan residents with Michigan State University
- ✓ Results utilized in development of the 2008-2012 IT strategic plan

Strategic Management Team Action

- ✓ 2008-2012 Strategic Targets and Metrics vetted by IT managers and assessed against current slate of IT projects and priorities
- ✓ Utilizing MiPlan milestone tracking system, projects are monitored and reviewed during regular meetings of the IT management team

Best Practices Cultivation

- ✓ Initiated more formal relationship with Government Performance Project (GPP) and Pew Center on the States in order to facilitate exchange of best practices information and related resources

Michigan Today: Innovations and Best Practices

Michigan's comprehensive IT planning relates to the State's policy objectives and works to enable the most efficient and effective delivery of service across state government. IT leaders participate in all phases of the State's business planning process—the Cabinet Action Plan (CAP)—since it was in initiated in 2003, and newer innovation and re-eingineering projects such as the Government Process improvement initiative (GPii) and Great Workplace Action Team. They also benefit from best practices through programs like the Government Performance Project (GPP).

Proof Positive

Goal six activities support two objectives, achieving the full potential of digital government and transforming internal processes and procedures. A sampling of the strategies and initiatives necessary to enable these objectives—ranging from back office innovations to front office actions—are discussed in Appendix N.

Connecting the Goal to Action

Representative Initiatives for Goal Six*

Goal Six

Strategies

People: Fully realize customer needs and build a culture supporting change, innovation and excellence among employees and partners

Processes: Develop governance, change and portfolio management processes and standards to support, enable and drive the transformation of existing, and the development of new services

Technology: Employ best practices to improve government services through information, communications and technology

Initiatives in Motion

Proactive Problem Identification and Solving

- Developing a best-of-breed, publicly-available program performance and usage metrics system, modeled on state and national best practices and utilized to identify citizen and state service needs and track and assess government program performance
- Utilizing as a diagnostic tool for process changes and innovations and to drive organizational change through assessments and indicators

Government Process Re-engineering Center

- Creating this center of excellence will drive knowledge networking, mass collaboration and innovation
- Involving state program and project managers, private sector, not for profits and citizen participants, as well as temporary, project-based agency and private sector staff on loan and assignment

Michigan Business Services improvement initiative (MBSii)

- Streamlining government's interactions with the business community is the focus of this project to create a one-stop portal in collaboration with business partners
- This single Web interface and 1-800 number will support further regulatory and business-permitting reform and make state government more lean and nimble
- Design and implementation plans are already underway with expected rollout of Phase I in late 2008; federal and local business-government components will be added in the long-run

More than a tool, IT in Michigan enables the state's evolution and ability to reach its public service potential.....

Enabling Innovation and Transformation: Tools & Solutions

- Competency centers
- Project and portfolio management
- Performance management, metrics
- Process redesign
- Technology planning and management

Michigan Tomorrow: Bolstering Alternative Energy and Economic Development

Like most wind farmers who relocated to the state of Michigan, Denise and Jake Thompson are a major part of the new, diversified economy of the state. In addition to growing their own Michigan-based business, the two are also leading an effort to foster exchange of ideas and information about resources, economics and technology in the wind farming industry. The State of Michigan, in conjunction with industry partners, established a "wiki" Web site for interested parties to share information and best practices on harnessing this new technology. These communities of interest have evolved into a consortium of wind farmers who pooled investments and developed a booming wind farm industry in northern Michigan.

*Appendix Resources: *Initiatives - B • Targets & Metrics - C • Associated Technologies - D*

A Look Ahead

Moving Ahead

Investing in our Foundation
Advancing Technology Solutions
Implementing Innovation Strategies

Moving Michigan Ahead

After over 50 years of IT operations and six years of a consolidated structure (see chronology below), Michigan's IT has advanced to a point where both existing commitments and some of the historical structural challenges facing the state can now be addressed. Required next steps range from continuing to provide core services to identifying, assessing and implementing solutions and technologies with transformational potential. The state has reached a unique juncture where government technology is maturing from operational consolidation to working with agency and external partners to drive and enable shared services, collaboration and innovation.

It takes more than a clear vision of action to carry out a strategic plan for the IT operations of an entire state government, especially a plan that seeks to stretch the boundaries and the capabilities of the systems and processes that are currently in place. The pages that follow articulate how the plan will be carried out both today and in the future and, just as importantly, how that plan will be measured and adjusted as appropriate over time.

Technology Solutions

Research and development of technology solutions are an important way in which Michigan's IT Strategic Plan is enabled and implemented. The IT strategic planning process for the state has consistently included an evaluation and review of the full range of current and emerging technologies feasible and appropriate for implementation. For the 2008-2012 period, areas of technology focus were selected based on a thorough assessment of state department and Michigan citizen needs and was informed by objective analysis of experts like Gartner, Inc. and Forrester Research, Inc.

A Timeline of Information Technology 1957 - 2012

1957 Acquisition of the first major computer in state government - Highways purchases a Bendix 6-15

1964 First automatic data processing (ADP) center consolidation 17 consolidated into 4 centers

1970 Executive Order establishes the Management Sciences Group & the first Information System Master Plan

1984 Implementation of the first desktop computers Department of State

1991 Consolidation of Information and Technology Management under a CIO (Deputy Director)

1995 Implementation of the State's first Web site

1997 Completed consolidation of mainframes in Michigan's first centralized data center

Michigan.gov

2000 Creation of e-Michigan and Michigan.gov

2002 MDIT centralized all executive branch IT assets and resources

Michigan's Next Steps

Implementing Our Strategic Plan

Technology Focus Areas: 2008-2012

Focus areas for the next five years are highlighted on the next two pages of this document (pages 22-23). They are also detailed in Appendix N "Michigan's Technology Future." The areas include:

- Streamlined Citizen Transaction and Self-Service
- Citizen Engagement Tools
- Shared Technology Infrastructure
- Information Collaboration and e-Discovery
- Enterprise Mobility
- Greening of IT

Over the next five years, Michigan's IT decision makers, in concert with the Michigan Information Technology Executive Council (MITEC) and other stakeholders, will determine the specific technologies to adopt for implementation. Some of the technology adoption will occur in the short range (less than two years), while others are further out (two to five years). The emphasis is on solutions with the highest or most transformational impact. Across the board, they fall into the following categories:

- Social trends and solutions: Consumerization, green IT, Really Simple Syndication (RSS) and social software
- Business trends and solutions: Business process modeling, centers of excellence, Web 2.0 business models and workplace technologies, software as a service and whole of government enterprise architecture
- Technology trends and solutions: Enterprise instant messaging , location-aware applications, mashups, open source, service-oriented architecture, radio frequency identification (RFI), social network analysis, unified communications, VoIP convergence, Web 2.0 and wikis.

Fifty Five Years Of Innovation And Service

2003
Creation of the Michigan Information Technology Executive Council (MITEC)

2003
Creation of the Office of Technology Partnerships

2004
First statewide Michigan IT Strategic Plan - integrated with the Governor's business plan

2006
30 data centers closed through consolidation between 2004-2007

2007
Published the Enterprise Architecture Strategic Approach

2008
Implement a new Michigan business tax system

2009
Implement identity and access management single sign-on solution

2010
Partner with DHS to create the Health & Human Service Eligibility System

2011
Coordinate the installation of broadband connectivity for over 390 rural hospitals and clinics

2012
Obtain Capability Maturity Model Integration - Level 3

Consolidation of State E-mail systems — 2006

Implement a shared services model enhancing efficient collaboration — 2008

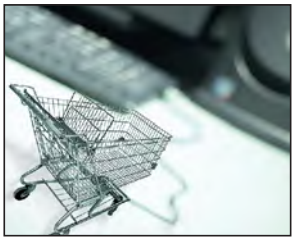
2010 Formally share project management capabilities with local governments

Michigan's Next Steps

Implementing Our Strategic Plan

Exploring the Technology Solutions 2008-2012

Streamlined Citizen Transaction and Self-Service

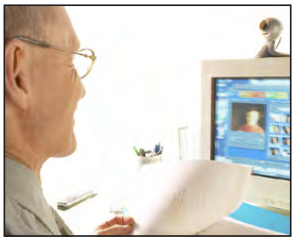


This area of technology solutions will focus on making government services more accessible to citizens and businesses. It is expected that Michigan citizens will continue to demand that their government provide them with convenient, cost-effective and secure service around the clock. Looking forward, Michigan will emphasize single-points of access to government services through multiple channels and continue the commitment to making existing e-government services faster and easier to use.

Today this technology takes the form of ATM-style kiosks at Secretary of State offices, online licensing and certifications, as well as access to services from mobile devices to purchase fishing licenses. In the future, technology will take the shape of things such as a new one-stop business transaction portal; the expansion of text alerts to citizens on topics like product recalls, traffic congestion and lottery information; the creation of a single point-of-sale for hunting and fishing licenses and online examinations and credential authentication for individuals in various fields, such as pesticide applicators or weights and measures service personnel.

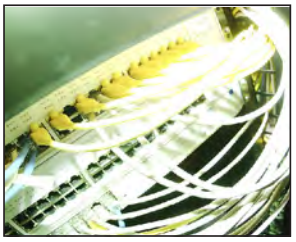
Citizen Engagement Tools

Over the next five years, Michigan will be identifying and implementing the latest technologies to further engage citizens in government operations and decision-making. Citizen engagement tools include using technology to seek public input or to foster discussions among citizens, businesses and government. The ability to provide meaningful citizen involvement opportunities is partly technical in nature, but also requires an understanding of cultural and organizational characteristics of our stakeholders.



Action being taken today includes the expansion of MITEC Citizen Self-Service Committee to include citizen engagement technologies and recommendations, and working within the new Innovation Advisory Board (Goal 6) to evaluate and report on Web 2.0/3.0 opportunities for citizen/government engagement. Looking ahead, Michigan will be utilizing mashups, wikis and other Web tools to engage citizens in government and rolling-out activities such as virtual town meetings.

Shared Technology Infrastructure



Sharing and integrating infrastructure resources between public and private partners is a top priority in 2008-2012. Over the years, Michigan has worked aggressively to build a unified technology infrastructure across agencies that is well-coordinated, interoperable and universally available. For state government, a shared technology infrastructure is steadily evolving as the primary structural foundation that links and empowers all operations.

This foundation creates the promise of seamless information accessibility, improved return on investment, reduced operations risk, lower cost of ownership and maximized technology resources. It also creates new opportunities for sharing infrastructure across and beyond government borders with local governments and private industries. Looking ahead, Michigan is working to make WiFi available across state locations. In the future, the State will also be completing Michigan/1 Adopt standardized desktop package roll out; converting 75% of all State offices to Voice over Internet Protocol (VoIP) technology and managing all cellular contracts centrally.

Transforming the way government operates—delivering innovative information technology solutions with excellence and integrity

Michigan's Next Steps

Implementing Our Strategic Plan

Information Collaboration and e-Discovery

Facilitating the sharing and integration of data among departments to leverage information and enable quicker and more effective decisions is the focus in this area of technology. The breaking down of old barriers between government agencies—along with new federal court rules for managing electronically-stored information—have greatly increased the need for common methods of communicating, sharing and bringing information to decision-makers. Through information collaboration and e-discovery, Michigan will fulfill federal requirements and foster more efficient and timely use of information across agencies.

Today, Michigan is focused on a multi-agency Child Support Enforcement System and the Teradata warehouse. Tomorrow, the state will be developing the Agencies Sharing Knowledge (ASK) statewide, data-sharing strategy project; unifying human services/case management systems; enabling multiple agencies to share grant application information and allow for better budgeting; standardizing and automating human resources and clarifying e-discovery governance issues, relationships and responsibilities.

Enterprise Mobility

Utilizing technology to connect state employees to their work anywhere at anytime from anyplace is Michigan's focus in this technology area. Enterprise mobility brings benefits to state government, state employees and to citizens as a whole. For state government, greater mobility can increase productivity, reduce overhead and occupancy costs, help recruit and retain good employees. For employees, mobility can promote job satisfaction, reduce commuting time and transportation expenses and improve quality of life. For citizens as a whole, mobility decreases traffic and highway congestion, lessens parking problems, decreases air pollution, reduces energy consumption and increases time for civic involvement.

In 2008, Michigan's Bureau of Construction Codes inspectors use rugged laptops onsite, Michigan State Police officers have access to criminal justice computer systems from wireless laptops in their vehicles and Unemployment Agency investigators document investigations in the field, uploading changes to the main system remotely. Looking forward, the State will be better integrating mobile solutions into pandemic and emergency planning; to increase safety of caseworkers, Michigan will be incorporating global positioning system (GPS) features into a mobile Department of Community Health case management system; the State will be improving the MDOT vehicle fleet management system which uses GPS to better manage planning and scheduling of vehicles and will be further developing the mobile worker program.

Greening of IT

This area of technology focuses on increased environmental awareness and adoption of green principles in enterprise IT facilities, equipment purchases and disposal of equipment. Michigan embraces its obligation to reduce threats to our air, land and water and to fight global climate change. Reducing carbon dioxide emissions, properly disposing of outdated equipment and cutting overall energy consumption are all important ways to fulfill these responsibilities and can also bring new cost savings. By engaging in green IT, Michigan will lead by example and promote green consciousness among our state's residents and businesses.

Today, this means increasing the use of power saver printers that reduce the amount of energy the devices consume when not in use (and according to executive directives) turning off all networked desktop and notebook computing devices at the end of the work day whenever possible. In the future, Michigan will continue data center consolidation efforts, make use of unified communications, incorporate green criteria into IT systems procurement and increase efforts aimed at boosting product lifecycles and recycling.

Michigan's Next Steps

Implementing Our Strategic Plan

Implementing the Plan

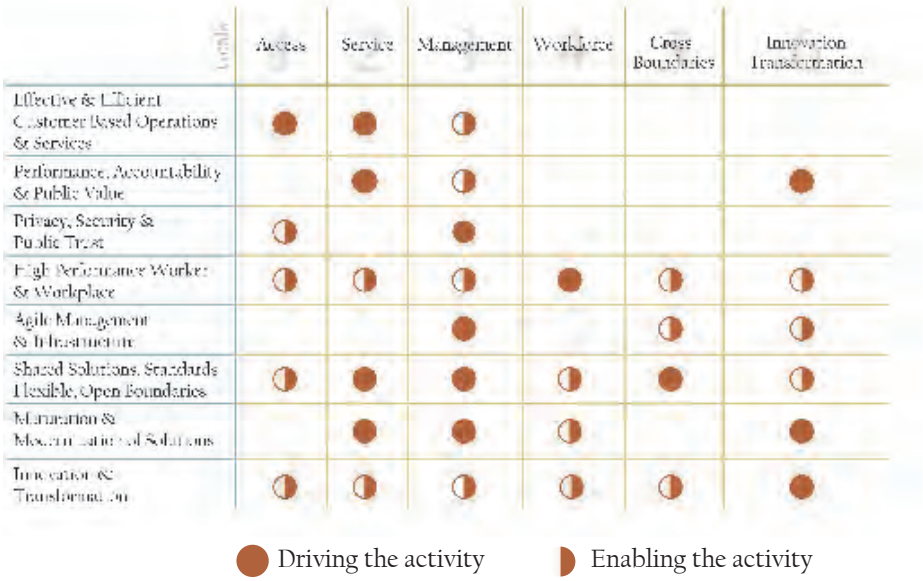
In addition to exploring the areas of technology outlined in the preceding pages, Michigan will be moving from "Vision to Action," and carrying out the 2008-2012 Michigan IT Strategic Plan according to the action steps outlined below. The figure below illustrates how the driving principles—developed with and for IT stakeholders across Michigan—are linked to the resulting six goals and related activities described throughout this plan.

Step One: Build Upon Existing Strengths and Best Practices
Building upon existing gubernatorial leadership and aligning to the Cabinet Action Plan (CAP) and agency business plans is critical. Given Michigan's IT maturity and existing capabilities as well as the strategic role of IT, the State can now aggressively move into a shared, cross-boundary service model with national-caliber information and performance management.

Step Two: Remain Active and Engaged with National and Global Issues
Steadfast recognition of changing national and global issues will also play a role in moving this plan forward. Globalization and the new economy, consumerization of IT and social networking are just a few of the topics to consider, not to mention utilizing sustainable resources and assuring privacy and security are also key.

Michigan's IT Strategy and Transformation Map

Linkage Between Michigan's Driving Principles and IT Goal Actions: 2008-2012



Step Three: Address Michigan's Priorities
Development and integration of the plan must be closely tied to the priorities specific to the state of Michigan. To this end, we must:

- **Maintain Statewide Alignment:** Provide IT support to the CAP and agency business plan priorities and strategies, strengthening existing initiatives and identifying new opportunities
- **Challenge Structural Status Quo:** Leverage the strategic role of IT, emphasize innovation and transformation through partnerships with Pew and A. T. Kearney, Inc.
- **Develop Signature IT Initiatives:** Provide issue assessment, solution and process design and IT support for selected flagship issue areas such as economic development, health care and education
- **Support Agency Priorities:** Listen to agencies and develop innovative but practical IT solutions that meet agency needs

Step Four: Bridge Driving Principles and Goals and Incorporate them into Daily Activity
The illustration above provides a framework of principles that bridge and integrate goals, strategies and initiatives and guides both the IT strategic direction, as well as IT plan implementation. Among other things, over the next five years, we must develop remaining functional and service area plans, organize strategic technologies both at the enterprise level as well as targeted principles and goal areas and develop and integrate a shared services model.

Citizens & Agencies at the Center - MITEC Survey Results in Action

In the October 2007 MITEC IT planning survey, a majority of Michigan's agencies stated that they will have to do more in the future with fewer staff and less resources. We responded: Goal two strategy – Work with agencies to develop technology projects that share resources, increase efficiency and improve workflows. Agencies also indicated that their customers will demand more online services, an agile approach to applications, Internet tools and access to information. We responded: Goal one strategy – Provide citizens and businesses with one simple access point for services.

Michigan's Next Steps

Implementing Our Strategic Plan

Action Steps

Below are selected key initiatives that will ensure effective and improved IT service delivery. These are for both the sustainable near term future (through 2010), as well as the intermediate future (through 2012), and include:

Sustainable Near Future - Ensure Accountable Management and Performance

Refine and modernize the management and governance framework for today's, as well as tomorrow's, challenges in support of strategies under goals one, two, three and four.

Effective and Efficient Customer-Based Operations and Services: Continue optimizing core service delivery, facilitating and simplifying access to government and services and improving efficiencies and reducing costs

- Enhance agency participatory role by instituting MITEC Agency Operations Partnership Team (A-OPT) to improve operations and better meet customer needs (2008)
- Implement the Michigan Business Service improvement initiative (MBSii) - a single business portal and contact center providing the private sector with a self-service access point to multiple channels of state government service (2008)
- Develop at new Web services on Michigan.gov that can be shared across multiple applications and continue to meet business needs (2010)

Performance, Accountability and Public Value: Ensure public value through alignment among state policies, citizen service and agency business needs and ensure accountability and high performance service delivery through best practice performance management

- Launch management accountability portal for government performance, statistical and fiscal information (2008)
- Establish formal performance tracking and monitoring capabilities to ensure transparency, identify and manage change opportunities and to report on and manage performance (2008)
- Design and implement MDIT budgetary tracking and financial reporting system (2008)
- Enhance agency-specific service level agreements to include MDIT performance measures (2009)

Privacy, Security and Public Trust: Ensure public trust through providing optimal levels of security, citizen privacy and disaster avoidance and mitigation

- Establish a new Michigan chief privacy officer (CPO) in 2008 who will chair the Michigan Government Privacy Council
- Provide identity and access management, single sign-on solution (2009)
- Establish application scanning for security vulnerabilities to ensure continued PCI compliance (2009-2010); complete Critical Infrastructure Security Upgrade (CISU) Project (2010)
- Update policies and procedures and provide new targeted training to state employees regarding cyber ethics and the new Internet-based social networks
- Develop updated disaster recovery plans for all critical applications (2009)

High-performance Workers and Workplace: Develop and maintain a high-performance workforce and workplace, capable of supporting current service needs and meeting future requirements

- Partner with Civil Service to modernize and standardize the classification and pay structure for IT professionals to support attracting and retaining a high-performing IT workforce (Ongoing)
- Develop a modern, ongoing recruitment program including an MDIT brand identity (2008)
- Engage in succession and workforce planning; develop strategy in 2009 and implement by 2010

Michigan's Next Steps

Implementing Our Strategic Plan

Innovation, Change and Transformation of Government (Intermediate Future)

Provide a mature, modern, best practices scope of solutions, and enable innovation, change and transformation of government, in support of strategies under goals two, three, five and six.

Agile Management and Infrastructure: Deliver fundamental process, service delivery and infrastructure changes as they are needed

- Enhance the agility of technology management and infrastructure; balance the challenges of supporting or phasing out outdated technologies with new opportunities; develop employee skills and competencies and maintain a diverse portfolio of projects to fulfill needs and tap into best practices wherever possible (2009 and Ongoing)
- Realign technology management with business process design; use information and relationships with partners and customers to support a new and more agile IT decision making, business processes, sourcing, infrastructure and service operational design (2010)
- Develop and adapt the business model, policies and principles around opportunities such as virtualization, modularization, Web and multiple service delivery options for infrastructure, information and applications (2010)

Shared Solutions, Standards and Flexible, Open Boundaries: Maximize sharing solutions, services and infrastructure within the enterprise, other levels of government and the private sector, moving toward compatible, shared standards

- Develop a shared-services delivery model (2008)
- Implement single citizen address standard and verification tool to be used across state government (2010)
- Research the feasibility of a partnership with the private sector to build a state-of-the-art data center that not only fulfills our mutual capacity needs, but also provides an economic development opportunity for Michigan

Maturation and Modernization of Solutions: Ensure sustained modernization of a comprehensive range of solutions and technologies with transformational or high-performance potential that are suitable for connecting tiers of government, public and private sectors and improving performance and customer service

- Implement an innovations and best practices tracking, assessment, design and management capability (2008)
- Develop a Michigan information framework, integrating business intelligence and other related initiatives and refine information architecture (2009)
- Fully-implement Web 2.0 technologies within Michigan.gov and assist agencies in understanding potential uses and implementing technology (2009)
- Assess and implement alternative acquisition and delivery models (2009)
- Fully implement State Unified Information Technology Environment (SUITE) model and improve processes to achieve CMMI Level 3 compliance enterprise-wide (2012)

Innovation and Transformation: Develop an expectation, culture and capacity for innovation and transformation of government. Shift from a support and enabling role of IT in service and business processes to a driving role, providing leadership and serving as a catalyst in business process and organizational change

- Develop an implementation and management plan to carry out the activities in this goal area in 2008 (with updates every two years)
- Strengthen and formalize the project, portfolio and change management process; create an enterprise-level project and portfolio management office in 2008 and formalize IT investment planning and management in 2009
- Utilize Government Performance Project (GPP) and Pew Center on the States best practices information and related resources in developing and implementing Michigan solutions aligned with structural change, each category of the Cabinet Action Plan and Government Performance improvement initiative (GPii) priorities (2008)

More than anything, as this planning document is finalized, it is important to remember that the completion of the plan is really the beginning, not the end.

Michigan's IT Planning Process

Table of Contents

A Planning Process

Vision of Action

Our planning direction flows out of a broad statewide view, through internal and external review and validation, resulting in the detailed IT initiatives and specific targets of this plan. Unlike other state agency plans, which focus primarily on one area of activity, Michigan's IT plan incorporates services and solutions that cut across many topic areas and serve all state departments and citizens.

MDIT provides basic services such as e-mail, security and storage to all state agencies. In addition, we partner with agencies to implement focused business solutions and to leverage technology to reduce costs and improve efficiency through shared services. We enable and support citizen services, such as the Secretary of State kiosks used by the public for driver's license renewals and the mobile Web portal that will allow citizens to use cell phones, personal digital assistants (PDAs) and other mobile devices to access online services.

All of these complex initiatives must be coordinated and tied to a long term vision, not simply driven by specific targeted needs or a desire to improve.

Everything we do is tied to the IT Planning Process, a process that has been evolving over the last 5 years. It begins with the governor's vision for the state.

The Governor's Goals and Objectives

Michigan's statewide planning process guides the governor, the budget office, state agencies, and the legislature. It produces strategic direction, cost and performance information, and issue and accountability tracking, that enables them to make decisions on what will be implemented, and follow through on promises made. The planning process starts with the identification of statewide priorities by the governor through the annual State of the State address, which leads to the development of an executive budget to fund those priorities, legislative input to the executive budget and agency project-level alignment to these priorities.

All of this is written into a detailed plan known as the Cabinet Action Plan (CAP). State agency plans are aligned to the CAP, and the statewide vision, through their goals and strategies and through regular initiative tracking and reporting.

In 2003, rapid changes in Michigan's manufacturing economy revealed the need to re-think the state's approach to long-term strategic planning. Michigan's traditional reliance on the automotive industry had created unique challenges for state government. Worker buyouts and plant closings set in motion an economic storm that simultaneously resulted in fewer revenues and an increased demand for government services. The time for change was upon us, and the administration recognized that effective, long-term strategic planning was an absolute necessity to drive Michigan's transformation.

For the past five years, this process has developed, funded and tracked bold, multi-agency initiatives that look beyond the boundaries of a single agency and the next budget cycle. It has responded to citizens' needs and planted the seeds of economic recovery.

While these five priority areas (see state of Michigan Goals above) are what makes sense in 2008, the planning process is designed to maintain the integrity of Michigan's overall strategic direction, but flexible enough to rapidly respond to changing socio-economic conditions.

State of Michigan Cabinet Action Plan

Education
Preparing All Students for Success

The Economy
Alternative Energy & Economic Development

Communities
Protecting Our Families & Our Quality of Life

Health & Human Services
Making Health Care Affordable & Accessible

Better Government
Making Government More Cost Effective & Efficient

The Cabinet Action Plan

In response to this need for statewide strategic planning, direction and alignment, Governor Jennifer Granholm chartered the Cabinet Action Plan (CAP).

The Governor's Advisory and Planning Team (GAP) worked with management from each cabinet agency to identify key agency business goals. In developing these business goals, the GAP worked with the cabinet members to ensure that business goals aligned to the state's priority areas. Existing departmental projects and initiatives from each of the agencies were then aligned with these goals.

The Cabinet Action Plan brings the executive budget to life by publicly defining the governor's highest priority commitments to the citizens of Michigan. MDIT planning staff help facilitate this process by working with policy advisors and key state agency personnel to clearly define the actions and outcomes for each agency. These then become the commitments of each agency to the implementation of the statewide priorities, and they are tracked by the governor at the cabinet level.

This statewide portfolio of business initiatives is a group of measurable actions, taken by our executive branch agencies, that move the state toward established goals. The CAP guides Michigan and makes state government more efficient, responsive and accountable.

In summary, the CAP process ensures that initiatives are aligned with the state's mission, vision and values (both statewide and departmental), gubernatorial long-term priority areas and budget constraints. The major characteristics include:

- Cabinet-level, three-year strategic planning horizon, updated regularly
- Direct participation by the governor in the planning process, initiative development and measuring results
- All agencies are involved in the alignment of the individual department business plans and initiatives with the CAP
- The planning process includes bi-weekly reporting on status and outcomes
- Teams made up of Cabinet members and the governor's staff remain responsible for implementing the initiatives associated with the statewide priority areas

Michigan IT Strategic Plan

The business needs set forth in the Cabinet Action Plan, and the internal and external planning that we do at the enterprise level, define Michigan's IT Strategic Plan. We implement client solutions based upon the comments, recommendations and feedback garnered through various exercises, planning events and surveys. These responses, along with our review of the Cabinet Action Plan, allow us to implement initiatives that will provide the greatest benefit at the lowest cost to the entire state of Michigan.

While MDIT clients fund IT services through their departmental budgets, strategic planning in and across the various parts of MDIT ensures that enterprise-appropriate solutions are provided. While the IT project list may reflect individual agencies' immediate needs, those projects are completed so that other agencies can leverage the applications already in place.

Michigan's comprehensive information technology planning relates to the state's overall policy objectives and is focused on enabling the most efficient and effective delivery of service across state government.

External collaborators and stakeholders from all three branches of government are involved in the development and implementation of the plan, allowing Michigan to be firmly rooted in addressing the issues of today, but forward-thinking enough to proactively seize the opportunities of tomorrow.

Michigan is currently on the third iteration of an all-encompassing, multi-year planning process. Regular progress updates are provided to key stakeholders, executives, agencies and our state's Chief Information Officer (CIO). We will discuss how the plan is created in the sections that follow.

Planning Process Overview

MDIT has worked hard to ensure that our 2008 planning process was inclusive of citizen, agency and staff input. If the plan is to be "owned" by those who will be charged with its implementation, then they need to be involved in its creation. The process we have established in 2008 draws from the 2004-2007 CAP planning process, earlier IT planning processes and feedback from agencies and staff that we received over the last several months.

Going forward, this is the process we will use, updating and improving it as we go. A strategic plan, like the process used to create it, must be adaptive and flexible, while holding tight to a few, clear, vision-driving goals.

The SMT and EST Teams

The MDIT governance model is structurally organized to facilitate and implement the Michigan IT Strategic Plan. Governance begins with the Strategic Management Team (SMT), which is comprised of the executive leaders of the organization. This team is responsible for the visioning of the IT future for Michigan. The SMT provides concrete deliverables for the Strategic Plan. It works together to align the resources with the plan and ensure delivery of the governor's objectives.

The Core Enterprise Service Team (EST-Core) is then tasked with the tactical implementation of the plan. The division leaders that report to the SMT executives make up the EST-Core. This team works together to ensure cross-agency functions, to assign specific resources and timelines to each deliverable of the Strategic Plan. From here, the Enterprise Service Team (EST – Extended) takes over to make the plan wholly operational. This structure (strategic - to tactical - to operational) is the body that breathes life into the Michigan IT Strategic Plan.

These manager teams work to frame and implement IT initiatives that support the agency business drivers and statewide goals. They use tools such as surveys and priority setting exercises in their evaluation of current and past performance and in setting direction. These teams work together to:

- Evaluate the progress made on previous plan commitments
- Develop vision and mission statements for the agency
- Complete SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis and review input from all other MDIT teams
- Determine top agency business drivers
- Take oversight responsibility for defined sections of the plan
- Develop initiatives and targets for each IT plan goal
- Measure the progress on key initiatives throughout the life of the plan

Goal Ownership

We began our update of the 2005 IT plan in September 2007 with the development of a rough plan framework which included the CIO's vision and broad goals. Each member of the SMT was assigned a plan goal for ownership and follow-through. This process ensured that the content and policy brought into the plan would be consistent with the common vision and coordinated internally. The "goal owners" were responsible for making each goal real, investigating technologies for implementation, determining practical initiatives, seeking staff input and bringing updates back to the SMT.

Writing the Plan

The writing of the plan began with our first executive planning meetings in early October. The SMT began with a review/update of the vision and mission statements. Each goal owner was provided with an Advanced Planning Template that included some resources and key elements to consider for each goal, an expected timeline for results and a framework for goal content.

The CIO introduced 6 guiding principals with the expectation that each of the goal areas would integrate these principals. The work of the executives was compiled over the next 4 months for eventual review by MITEC, internal and external partners and MDIT teams. See the MITEC section below for more on the role of this group in developing the content of the 2008 plan.

Strategies Initiatives and Targets

Goals are broad statements of how an organization would like to see the state of things to come. Strategies begin to frame how the goals will be accomplished. The specific projects and initiatives (targets) that are tied to the strategies and goals get the job done. The first step in development of the initiatives was a review of the "promises made" in the 2005 IT plan. This reality check on what we said we would do and what we actually accomplished, was an important first step in the development of the key strategies and targets for each of the 2008 plan goals.

During the course of several months, the goals, strategies and targets were reviewed by internal and external partners. This feedback led to further clarifications and rewrites.

Change Management

Michigan's IT Plan is not a static document; it needs to be responsive to internal and external demands. As the initiatives were developed, new and existing projects were entered into an initiative tracking tool called MiPlan. To ensure progress toward the plan's goals, the Bureau of Strategic Policy works with the SMT to review the progress of the top IT Plan initiatives during regular meetings. Measuring our progress is an important aspect of the planning process and deserves further discussion below.

Continuous Touch Points

Key MDIT managers and staff, in conjunction with MITEC (described below), regularly examine government, constituent and technology trends to set the direction for State of Michigan IT development and advance the governor's Cabinet Action Plan priorities. Over the last two years, seven, joint MITEC / MDIT subcommittees were formed for a time-limited exploration of potential uses for seven, key technology solutions:

- Citizen Self-Service
- Data Integration
- Enterprise Contact Center
- Collaboration Tools
- Mobile Computing
- Shared Administrative Services
- Integrated Infrastructure

Each group prioritized potential uses based upon their impact in multiple agencies across the state. The groups developed business case justifications for their priority technology applications, which will help secure funding for collaborative technology investments in the next budget cycle.

MiPlan – Weekly Reporting

In 2005, the Michigan Department of Information Technology planners developed the MiPlan system. Originally intended as a way to streamline the monitoring functions of the CAP, MiPlan has fundamentally changed the State of Michigan's approach to strategic planning and measurement at the cabinet and agency level.

MiPlan gives the governor, agencies and cabinet members immediate access to, as well as the ability to measure, the progress and performance of the top initiatives. Through this tool, long-term strategic planning is incorporated into the day-to-day operations of government, ensuring not only a healthy balance of long versus short-term objectives, but also a planning process that can be continuously updated to account for rapid changes in Michigan's economy, budget and such.

A Planning Process

MiPlan is a customized, Web-enabled, Oracle database where officials from all state agencies can enter and track all of their CAP or departmental initiatives. Each initiative or project is measured and prioritized according to its alignment to executive goals, feasibility of success and potential benefits.

Projects in MiPlan are continuously monitored using dashboard reporting which indicates an overall status of green, yellow or red. Key projects are assessed by the governor at cabinet meetings every other week using this same tool.

MiPlan has been so successful that individual departments are using the tool for not only cabinet-level planning, but also for individual department and work area planning. There are currently more than 500 agency-specific initiatives being monitored by MiPlan.

MiPlan was recently recognized in Michigan's 2007 Government Performance Project grade, which noted that Michigan keeps moving toward its goals, targets and deadlines, in part, by keeping tabs on progress through MiPlan. It was noted that the MiPlan tool, which is accessible to all agencies and is monitored by the governor's policy staff, is unique to Michigan.

Plan Input

The diagram here shows some of the stakeholders, purposes and methods used in creating the plan. The sections that follow will outline the ways that Michigan seeks out input from internal and external stakeholders in the creation of the IT Plan.

The CIO Vision

The chief information officer (CIO) for Michigan sets the vision for MDIT and puts this vision into action through the IT Plan goals. The CIO, as a member of the SMT, is involved in making course corrections throughout the planning process, and is ultimately in charge of progress. During planning, staff assist the CIO by providing plan content for review at several key points along the process. As the plan is put into action, regular reports to the SMT through the MiPlan reporting tool allow the CIO to make changes, add or eliminate initiatives and to make sure that we are moving toward our shared goals. The 2008 vision of the CIO is summarized in the opening sections of the IT Strategic Plan document.

MITEC Involvement

The Michigan Information Technology Executive Committee (MITEC)—chaired by the state CIO and comprised of leaders from each of 19 state departments, the legislature, and the judicial branch—is an advisory body that assists in the planning, development, implementation and management of IT services and solutions. MITEC provides counsel and exercises decision-making authority over IT in the state. In addition to bringing their business-specific perspectives and insights to the table, MITEC assists by examining government, constituent and technology trends.

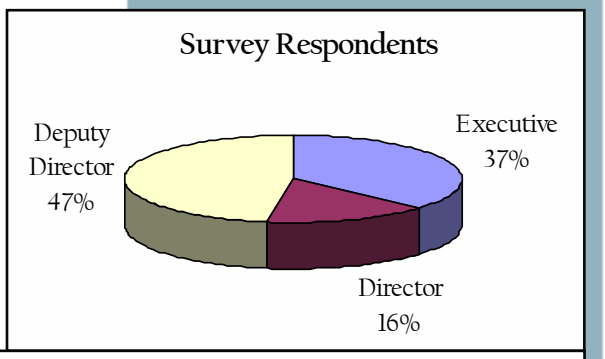
During the development of the 2008 IT Strategic Plan, MDIT engaged MITEC in two important ways. First, our information officers (IO's) held a series of interviews with agency managers to determine agency business demands. The IO's asked this question of the agencies, " what are your business needs, and how do you expect to use technology to meet them over the next five years?"

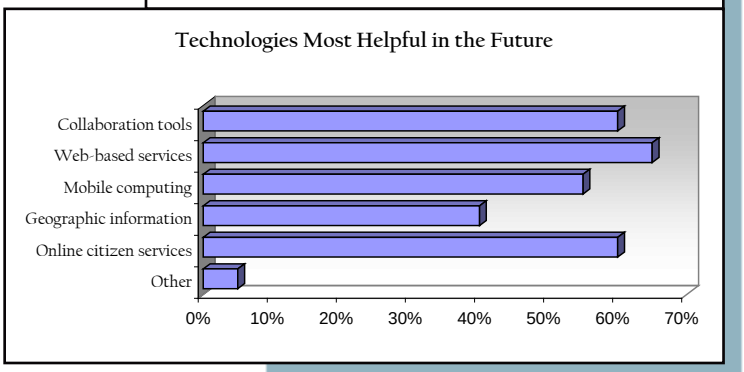
Second, MDIT created a Web-based survey that was completed by the state departments and several agencies. The survey related to the use of technology in meeting agency business demands. It provided MDIT with a check on our goals and helped to set the direction of the agency.

Among the 18 targeted questions we asked of this executive team were the following:

- How has IT helped or fallen short in meeting your business demands?
- What do you see as your biggest challenges today and in the future?
- How do you see technology serving your business in the future?

When asked about the biggest agency challenge in the next 3 years, 78% of the agencies responded that meeting business objectives with fewer resources, staff and funding would be the biggest challenge. We also asked MITEC about technologies they wish they were using.





MITEC Planning Survey- Future Technologies

The respondents stated that the best use of information and technology would be in daily operations, achieving cost-efficiencies and in improving citizen service. Other findings of the survey included a rise in the need for telecommuting among the agency staffs and an increase in the need to share data with other departments, inside and outside of state government. These findings have real implications for the direction of IT in Michigan over the life of this plan.

The online planning survey was a tool that MDIT used early in the plan development process. The responses to these surveys help us to align the goals of the IT plan and to create concrete measures that are targeted to address the specific agency business drivers. This process closes the gap between what agencies need and the direction of the plan.

Strengths, Weaknesses, Opportunities and Threats (SWOT) Analysis

A SWOT exercise is a way of highlighting what our stakeholders feel about the organization at one point in time. It sheds light on the questions "what is working, and what is not?", "what should we be doing?", and "what should we stop doing?" By examining what are viewed as weaknesses and threats and pairing them with our strengths and opportunities, we begin to get a clear picture of what needs to be done right away and what should be included in our strategic plan over the five next years.

The planning team used the SWOT findings as a guide to the development of the goals and targeted initiatives in this plan. We carried out SWOT events with MITEC, the SMT (Strategic Management Team), the IO's (information officers), and the EST (Executive Service Team). In addition, we targeted teams within the MDIT organization. The Infrastructure Services Division (IS) used the process in a two-day retreat to kick off an in-depth analysis of their 5-year initiatives. The results helped to guide the IS Strategic Plan development (see Appendix N).

The SWOT information was compiled and grouped to allow a comparison between responses. This allowed for a gap analysis, both internally and externally.

Staff and Team Meetings

During the development of the plan, we sought input from team and staff at regular team meetings, including the EST, Agency Services, and Infrastructure Services. Several of MDIT's many subgroups have detailed plans that guide their progress. As these subplans are completed, they will be linked to the IT plan in the Web presentation.

Information Officers and Agency Input

In addition to internal review and SWOT exercises, the information officers carried out a series of interviews with their agencies. The IO's asked questions to capture the business drivers of the agencies. Among the questions asked were:

- How do you see your line of business changing (demand, service types, mandates)?
- In which areas do you expect to face your biggest challenges?
- Are you investigating new technology opportunities that will help you to meet future business demands?

The responses to these interview questions were just a part of the fact-finding prior to the plan creation. Combined with the SWOT results and the online survey, these responses provided us with a better understanding of agency challenges.

A-OPT Process – In 2007, MDIT formed an Agency Operations and Partnership Team consisting of 35 agency and MDIT staff. The intent of this group is tactical as much as strategic, and the focus is on enterprise-wide issues and how we can improve our service to agencies.

A-OPT is a decision-making entity and reports to MITEC when appropriate. MDIT is not a voting member of this group, but works with A-OPT to help them determine which issues need to be addressed and the priority of the issues. A-OPT reviews any issues that are of importance to the group. Some examples include:

- Desktop Support Services
- Billing Methodology
- Procurement Process
- Enterprise Administration
- Budget-Planning Process
- Service Level Agreement – Metrics
- New items MDIT should address
- File storage
- Risks

This effort is our way of tying our strategic planning to the issues most pressing to the agencies. Through A-OPT, we immediately address what can be fixed quickly, and plan for issues that are more complicated or resource heavy. The SMT reviews these decisions, and any longer-term solutions are addressed in the strategic plan.

External Review and Comment

MDIT reaches out to a broad audience in the preparation of its planning vision. We do this through established forums such as MITEC and the Office of Technology Partnerships (OTP), through focused surveys and stakeholder feedback opportunities.

Michigan's Annual Digital Government Summit

In the spirit of collaboration and teamwork, over 400 technology leaders from across the state, county, city and township levels of government gather annually at Michigan's Digital Government Summit. This event, organized in partnership with OTP and Government Technology Magazine, brings together leaders to discuss the future role of technology in government and to share opportunities for partnership, all with the goal of improving government service to Michigan citizens through technology.

National IT Organizations

We also share and receive input from other states, through the National Association of State Chief Information Officers (NASCIO), and many other national organizations, on best practices and opportunities. For example, when we were researching adding a new corporations e-filing system, we learned that the state of Colorado had an existing system. As it turned out, Colorado's system was exactly what we needed and because system requirements were the same, we were able to use portions of their code, save 12-months of development time and give $1.5 million of our $3 million appropriation for the project back to Michigan's general fund.

Michigan Citizen Survey

In 2008, working with Michigan State University, MDIT commissioned a survey about access and use of government services, specifically online services offered through Michigan.gov. This cooperative effort provided some broad information about the relevance of computer and Internet usage in the lives of Michigan's citizens. Questions focused on the means of Internet access, the frequency of use/accessibility of government services, the level of government services most sought after (local, county, state, federal) and how likely citizens would be to use Internet services such as blogs, wikis, or live chats.

The survey helped us to gauge the demand for services via Michigan.gov and further develop our citizen self-service initiatives in the strategic plan. This survey mirrored a citizen survey that was completed during the 2005 planning cycle, providing a picture of how access and demand for government services has changed over time.

Professional Research Firms

It is standard MDIT practice to have the draft strategic plan reviewed by multiple IT experts. During the course of the year, we identify 3 to 5 individuals and firms that we have worked with and who have planning capability and expertise. We matrix all of their comments to determine if there are major framework or alignment issues that need to be adjusted, or important technology pieces that are missing. All external feedback is reviewed in context of our internal comments (MITEC, SMT, EST) to look for parallel messages or missed linkages. This rounds out the plan, ensures that we are thoroughly engaging national caliber IT solutions, while meeting our responsibilities to Michigan's citizens.

Gap Analysis

In 2008, the SMT used a gap analysis to identify and highlight areas that needed improvement. The process involved determining and documenting the variance between where we are and where we are driven to be.

Once the expectation of performance was understood, the SMT compared these to our current level of performance in each of the four categories shown above. This comparison highlighted the gaps. These became an important focus during plan development. In addition, the gap analysis set the groundwork for our guiding principles which drove the development of Michigan's 2008-2012 goals, strategies and initiatives.

What we Examined	Gap Categories				How We Applied It
SWOT results Survey responses Goal setting exercises Agency business requirements How citizens access government Current policies Past strategic direction Past operational practices Performance history Industry best practices Global and national issues Statewide planning goals	Policy Gap	Strategic Gap	Operational Gap	Performanace Gap	Developing Guiding Principles Refining and integrating goals, strategies and initiatives Setting IT strategic directionc Establishing a plan for implementation

The guiding principles resulting from the gap analysis follow:

- Effective and Efficient Customer Based Operations and Services
- Performance, Accountability and Public Value
- Privacy, Security and Public Trust
- High Performance Worker and Workplace
- Agile Management and Infrastructure
- Shared Solutions, Standards and Flexible, Open Boundaries
- Maturation and Modernization of Solutions
- Innovation and Transformation

These principles serve as the foundation for all of the content in the 2008 IT plan. They were developed in direct response to the gaps between where we are and where we want to be. Our response to the gap analysis ensures that that the plan is aligned with the needs of our stakeholders and targeted to address specific identified areas for improvement.

Implementation

The completion of the plan is really the beginning, not the end. The goals, strategies and targets become marching orders for all of MDIT. The initiatives in detailed plans such as Infrastructure Services and Agency Services plans, are further developed in team plans such as the Data Center Plan and the Telecom plan. The IT plan must be agile; changes will occur and its direction must be evaluated regularly.

Communication Plan

An IT Plan communications framework is put in place that sets a schedule for the distribution and promotion of the plan. This schedule covers reproduction of copies, e-mail communications, in-house and external publications and articles, Web promotion, agency/citizen meetings, legislative communications, media relations and the production of presentation materials.

Team Plans

The Infrastructure Services (IS), Agency Services (AS) and the Office of Employee and Financial Services (OFIS) MDIT divisions use the IT plan goals as a starting point for the development of detailed project-level plans. In team meetings, work sessions, retreats and other forums, projects are aligned with the IT plan goals. This strategic alignment is critical to keeping the agency on target toward the IT goals.

Below is an example of how statewide planning goals are carried through to very specific team plans (2008 Infrastructure Services plan):

Statewide Planning Goal
CAP Plan – Better Government Making Government More Cost Effective & Efficient

> **IT Plan Goal 6**
> Innovation & Transformation – Drive innovative processes and technologies to transform Michigan's government service
>
> > **MDIT Infrastructure Services Plan**
> > Virtual Call Centers: Expand Voice over Internet Protocol (VoIP) capabilities to consolidated call center solutions

Ongoing Initiative Tracking and Reporting

The SMT reviews key IT plan targets on a regular basis. MiPlan scorecards show progress on top strategic projects. Both the SMT and EST use these scorecards to evaluate outcome and milestone dates and assess new challenges. Target dates, the scope of specific targets and other factors can be adjusted if necessary. This regular review keeps the plan agile and impacts a host of agency decisions. Michigan IT Strategic Plan is a constantly developing document. We do an annual review of the plan and begin a complete planning cycle every two years.

Web Access to the IT Plan

Michigan's IT Strategic Plan will be accessible via the Web and Michigan.gov. The Web presentation will be linked to the CAP, Michigan statistical information and in-depth team IT strategic plans such as the Infrastructure Services Plan (appendix N), the Enterprise Security Plan (appendix F) and the Enterprise Architecture Plan (appendix E). For detailed information, readers will be able to access unit plans such as the data center operations and telecommunications strategies for the state.

Top IT Initiatives & Enterprise Solutions

2008 Information Technology Projects

This section provides a listing and description of Michigan's top information technology projects. These represent just some of the IT projects that are underway in Michigan.

MDIT works with all Michigan government agencies to help them achieve their goals and serve Michigan's citizens. In some cases, projects cross agency boundaries and in many cases projects are enterprise wide, serving all state government agencies. Many projects are partnerships with state agencies and local governments benefiting all of Michigan's citizens. This list is constantly changing as projects are completed or new initiatives are identified.

The first section is a listing of the top IT projects by agency. Second is a complete list of projects providing a description for each, and showing their alignment to the Information Technology Strategic Plan and the Cabinet Action Plan.

Partner Agencies	IT Agency Business Drivers & Top IT Projects
	Creating Opportunity in a Changing World, Diversifying our Economy, Educating our People In these tough times, government cannot be all things to all people - we have to focus on four things: • A Job for Every Worker • Affordable Health Care for Every Family • Safe Places to Live and Work for All of Us • Quality Education for Our Citizens-Kids and Adults If we focus on these four things-if we say no to distractions and divisions and if we commit to urgent action-we will emerge from this challenging decade with a leaner, smarter, stronger and more entrepreneurial Michigan. **Top IT Projects:** ✓ Michigan Business Services improvement initiative ✓ Campaign to end Homelessness (Governor's Office) ✓ Statewide Case Management for Administrative Hearings (Governor's Office)
	The Department of Community Health (MDCH) is one of the largest agencies in state government and is responsible for health policy and management of the state's publicly-funded health service systems. MDCH IT Business Drivers: MDCH clients expect automated services and demand will increase as society moves away from employer- sponsored health care delivery systems. **Top IT Projects:** ✓ CHAMPS - Medicaid Management Information System upgrade ✓ Michigan Health Information Network (MiHIN), www.MiHIN.org ✓ Women, Infants and Children (WIC) System Replacement

Partner Agencies	IT Agency Business Drivers & Top IT Projects
	The Michigan Department of Human Services (DHS) assists children, families and vulnerable adults to be safe, stable and self-supporting. DHS IT Business Drivers: Remote and mobile computing remain important to DHS along with the upgrade of legacy systems. **Top IT Projects:** ✓ Bridges - Integrated Health & Human Service Eligibility system
	The Department of State (MDOS) has contact with more Michigan residents than any other state agency. The department serves the citizens of Michigan with programs designed to administer driver and vehicle systems, enhance traffic safety, protect consumers, ensure integrity of records maintained and oversee the statewide elections process. MDOS IT Business Drivers: MDOS will continue to benefit from Web and video-conferencing and will focus on technology re-engineering that will result from the BAM project. **Top IT Projects:** ✓ Business Application Modernization (BAM) ✓ Secretary of State Motor Vehicle and Driver's License systems ✓ Self-Service Stations
	The Michigan Department of Corrections (MDOC) provides public protection, while making the most efficient use of the state's resources, by ensuring that appropriate supervision is maintained so that Michigan's neighborhoods, families and citizens can be protected. MDOC IT Business Drivers: MDOC is moving toward mobile technologies, electronic file storage, Web-based technologies and biometrics. **Top IT Projects:** ✓ Michigan Prison Re-entry Initiative ✓ Offender Network Management Information
	The State Budget Office (SBO) is responsible for coordinating all aspects of the state budget including development of the Executive Budget recommendation, presentation of the budget to the Legislature and implementation of the budget after enactment. **Top IT Projects:** ✓ Financial System Study - Next Generation ✓ Time and Expense ✓ Michigan Information Data Base (MIDB) Business Objects Upgrade

B Top Initiatives

Partner Agencies	IT Agency Business Drivers & Top IT Projects
DEQ	The Department of Environmental Quality (DEQ) ensures that Michigan's land, air and water remain clean by regulating sources of pollutants, maintaining standards, limiting hazardous and toxic pollutants, informing the public about current conditions and administering diverse prevention programs. DEQ IT Business Drivers: DEQ sees more orientation to online Web-based services, mobile computing and data access to central electronic files, use of GIS and collaboration tools. **Top IT Projects:** ✓ e-Manifest - Electronic Manifest Tracking System ✓ Health and Environment Data Integration Project for Homeland Security
DL&EG	The Department of Labor and Economic Growth's (DLEG) mission is to grow Michigan by promoting economic and workforce development, stimulating job creation and enhancing quality of life in Michigan. DLEG IT Business Drivers: DLEG will increase use of the Internet to provide customer service, generating the need for more Web-based applications. However traditional paper intake will remain so document management for routing and paperless document access (via scanned images) will be needed. There will also be a need for greater use of available and emerging technologies. **Top IT Projects:** ✓ Commercial Services Licensing System ✓ Unemployment Insurance Agency System Re-write Phase 1 - Business Requirements Gathering
DEPARTMENT of MANAGEMENT and BUDGET • Since 1948 •	The Department of Management and Budget (DMB) provides financial, auditing, human resources, fleet, travel, state procurement, printing and mailing services, as well as facility design, construction and operation services. DMB manages the activities of the State Building Authority and Office of Retirement Services (ORS). DMB IT Business Drivers: DMB will develop more collaboration tools (videoconferencing, Web conferencing) and create more online citizen services. More must be done despite decreasing staffing. **Top IT Projects:** ✓ Vision ORS ✓ Fleet Management Upgrade ✓ Data Archive Project

Partner Agencies	IT Agency Business Drivers & Top IT Projects
Michigan DNR	The Department of Natural Resources (DNR) is responsible for the conservation, protection, management, use and enjoyment of the state's natural resources for current and future generations. DNR IT Business Drivers: DNR anticipates that citizens will expect ubiquitous access to information they want, when they want and by what means they want. With that in mind, DNR will pursue a single point of sale for hunting and fishing licenses and comprehensive data and file management. **Top IT Projects:** ✓ Integrated Forest Management Application ✓ Retail Sales System Upgrade ✓ Vegetative Management System
MICHIGAN Department of Education	The Department of Education (MDE) has responsibilities in the areas of early childhood development, educational assessment, educational technology, school improvement, professional preparation, special education, school aid, school finance and technical education. MDE IT Business Drivers: MDE needs business inquiry tools as a means to create meaningful summaries from different data sources. They will also be seeking more remote training tools and training on-demand opportunities. **Top IT Projects:** ✓ **Converting the MEAP Exam**
HAL	The Department of History, Arts and Libraries (HAL) provides access to information, preserving and promoting Michigan's heritage and fostering cultural creativity. The department includes the Library of Michigan, the Mackinac Island State Park Commission, the Michigan Council for Arts and Cultural Affairs, the Michigan Film Office and the Michigan Historical Center. HAL IT Business Drivers: HAL is seeking the ability to accept online payments without high transaction fees, enhance distance learning/online real-time participation, facilitate registration for workshops and conferences, improve database searching and use geographic information, such as Google Earth. **Top IT Projects:** ✓ Document Management Program

B Top Initiatives

Partner Agencies	IT Agency Business Drivers & Top IT Projects
	The Michigan Department of Agriculture (MDA) has a dual role of regulator and marketer. MDA provides Michigan citizens with quality services and information by working cooperatively with many state, federal and local agencies and other organizations including universities, colleges and associations. MDA IT Business Drivers: MDA will be pursuing additional communication tools such as instant messaging to improve internal efficiencies, provide additional customer service options and improve workforce retention; online and centralized business licensing and registration (including personal certifications) and a rework of the model for providing examinations and credential authentication for pesticide applicators and weights and measures service personnel. **Top IT Projects:** ✓ Animal Identification System ✓ **Licensing System Upgrade**
	Michigan Department of Transportation (MDOT) works to provide the highest quality integrated transportation services for economic benefit and improved quality of life. MDOT IT Business Drivers: MDOT will pursue business continuity planning to collaborate with local governments, increase self-service opportunities, (permits, reports, and traffic information), use more mobile computing and collaboration tools and increase its Web-based services while sharing data between systems (geographic information). **Top IT Projects:** ✓ Legacy Application Modernization Program (LAMP) ✓ FieldManager Enhancement - Next Generation ✓ Vehicle Information Integration VII ✓ C-Track (Contract Administration System)
	The Michigan Department of Information Technology's (MDIT) mission is to transform the way government operates while delivering innovative information technology solutions with excellence and integrity. **Top IT Projects:** ✓ Human Capital Management and Employee Development ✓ Leadership Development Program ✓ Succession Planning ✓ M/1 - ADOPT Migration Summary
	Michigan Economic Development Corporation (MEDC) is working to promote economic development and tourism in Michigan. MEDC IT Business Drivers: MEDC would like to see Voice Over Internet Protocol (VoIP) to assist with access to the state by the mobile workforce. Also, MEDC sees their Web presence growing over the next 3-5 years. **Top IT Projects:** ✓ Michigan.org site changes

Partner Agencies	IT Agency Business Drivers & Top IT Projects
	The Michigan State Police (MSP) provides general law enforcement services, and has the responsibility for the development and coordination of state-level programs, technologies and specialized services that enhance enforcement and emergency response capabilities for the entire public safety community. MSP IT Business Drivers: MSP is exploring geographic information systems (GIS) for crime mapping, real-time data collection and analysis and expanding video feeds to the operations center. MSP expects an interest and demand for Internet tools to increase, such as the Internet Criminal History Access Tool and the Public Sex Offender Registry, as well as expanding uses for mobile computing (devices used in working from the field, onsite inspection devices) and collaboration tools (videoconferencing, Web conferencing). **Top IT Projects:** ✓ Create a Fusion Intelligence Center
	The Office of the State Employer (OSE) works with contract negotiations, employee services, employee health management and great workforce development. OSE IT Business Drivers: OSE anticipates additional utilization of videoconferencing and Web conferencing and also predicts an increased need for mobile computing. Other opportunities include wireless access. **Top IT Projects:** ✓ Vision and Values Initiatives ✓ Agency Survey Support ✓ Re-engineering Program
	The Michigan Department of Treasury (Treasury) collects, invests, and disburses all state monies and administers major tax laws, property tax laws and safeguards the credit of the state and its local units of government. Treasury also invests retirement funds of Michigan's state employees, public school employees, state police and judges. In addition, Treasury distributes revenue-sharing monies to local units of government, audits municipal finance records and reunites abandoned property with its rightful owner. **Top IT Projects:** ✓ Audit Selection System Upgrade ✓ Michigan Business Tax System re-write ✓ New MERIT Award

B Top Initiatives

Partner Agencies	IT Agency Business Drivers & Top IT Projects
	The Department of Civil Rights (MDCR) investigates and resolves discrimination complaints and works to prevent discrimination through educational programs that promote voluntary compliance with civil rights laws. MDCR IT Business Drivers: MDCR has a need to replace aging equipment which impact system availability; improve the customer Web interface, enhance remote and mobile access and promote Web and videoconferencing in an effort to expand existing business process automation. **Top IT Project:** ✓ Addition of customer Web interfaces
	The mission of the Michigan Department of Civil Service (MCSC) is to provide innovation and effective and timely human resources (HR) consultation and services to attract, develop and retain a workforce that is diverse, flexible, creative and competent to meet the ever-changing needs of state government. MDCS IT Business Drivers: New Web- based services (sharing data between systems), enhanced collaboration tools (videoconferencing, Web conferencing) and MDIT resources in Web-based technologies (.net, Java, etc.). In addition, business inquiry tools are needed as a means to create meaningful summaries from different data sources, as well as increasing the use of videoconferencing and remote training tools such as training opportunities on-demand. **Top IT Projects:** ✓ Lawson Software Upgrade
	The mission of the Bureau of State Lottery (Lottery) is to maximize net revenues to supplement state education programs, provide fun and entertaining games of chance and to operate all games and bureau functions with total integrity. Bureau of State Lottery IT Business Drivers: Lottery has a need to become more service-oriented in meeting the needs of both retailers and customers and plans to expand the services that are available to both retailers and players, via the Web and kiosks. **Top IT Projects:** ✓ Lottery solution upgrade
	The vision of the Department of Military And Veterans Affairs (DMVA) is to be a proud military and veteran's organization, characterized by excellence and integrity for the fulfillment of their duties to our nation, state and to one another. Our values include integrity, excellence, teamwork and accountability. DMVA IT Business Drivers: The DMVA would benefit from accepting application for benefits/entitlements at a central office rather than geographically-separated ones.

Partner Agencies	IT Agency Business Drivers & Top IT Projects
	The Michigan Supreme Court is Michigan's court of last resort, consisting of seven justices. Each year, the Supreme Court receives over 2,000 applications for leave to appeal from litigants primarily seeking review of decisions by the Michigan Court of Appeals. The Supreme Court's authority to hear cases is discretionary. In addition to its judicial duties, the Supreme Court is responsible for the general administrative supervision of all courts in the state. The Supreme Court also establishes rules for practice and procedure in all courts. The Supreme Court IT Business Drivers: The Court is seeking greater use of collaboration tools and data sharing and needs workflow and document management solutions.
	Within the Michigan Attorney General's (AG) Office are the Child and Family Services Bureau, the Consumer Protection and Criminal Prosecutions Bureau, the Economic Development and Oversight Bureau, the AG Executive Office and the Governmental Affairs Bureau. The AG's Office IT Business Needs: The AG's office wants to develop the full functionality of existing applications and put in place more electronic interaction options between the courts and clients, increasing access to the IT environment. **Top IT Projects:** ✓ FileMaker Database Replacement

Shared IT Services (Enterprise-Wide Projects)	
	Shared IT services are services and applications vital to more than one agency that can be centrally managed as a service center. Shared IT Services will serve an increasingly important role as the state strives to improve service delivery and efficiency. Through consolidation and standardization the state of Michigan is better prepared to expand it's utilization of shared IT services. Below are examples of shared IT service area's that the state is pursuing: ✓ Business Objects Service Center ✓ Citrix Service Center ✓ Data Warehouse ✓ Document Management ✓ MI e-Grants

Top IT Project Descriptions

Below is a comprehensive list of state IT projects along with short descriptions for each. The columns to the right identifies the project's alignment with the Information Technology Strategic Plan goal areas and the priorities of the governor and the state of Michigan Cabinet Action Plan.

The five 2008 Michigan priority areas are:

				
Economy	Education	Communities	Better Government	Health & Human Services
Alternative Energy & Economic Development	Preparing All Students For Success	Protecting Our Families & Our Quality of Life	Making Government More Cost Effective & Efficient	Making Health Care Affordable & Accessible

#	Project	Description	State Priority
1	Advance Traffic Management System – ATMS	The Michigan Intelligence Transportation Services Center software will provide a framework for automatic incident detection at Michigan Department of Transportation facilities and provide automated responses to these incidents based on real-time traffic information. In addition, the software will provide enhanced capabilities to share data and video with multiple partners both in the Metro Detroit area and statewide.	
IT Plan Goal Alignment: 1, 2 and 5			
2	Aging Hardware/ Lifecycle Replacement	Phase out the older desktop operating systems and standardize the state on Windows XP. Also phase out Windows NT servers providing office automation support.	
IT Plan Goal Alignment: 3			
3	Animal Identification System	This Michigan system supports the federal NAIS program (The National Animal Identification System) under United States Department of Agriculture.	
IT Plan Goal Alignment: 3			

#	Project	Description	State Priority
4	Bridges	Bridges is re-engineering and integrating processes associated with the eligibility determination and case management of Michigan citizens seeking state assistance in human services (food, medical insurance, day care, basic economic needs, etc). It is developing integrated and automated tools that support these processes.	
		IT Plan Goal Alignment: 2 and 6	
5	Bridge Scour Management System	Provide an Internet-based method for filling out scour critical bridge action plan forms, store the form information in the department's bridge database and provide management tools for bridge managers to use when managing the state's scour critical bridges during flood events and for asset management.	
		IT Plan Goal Alignment: 2	
6	Business Application Modernization (BAM) – Driver License and Vehicle Registration	BAM is a multi-phased project that includes re-engineering the business processes, developing business requirements, designing and eventually building a technical infrastructure to support Department of State business	
		IT Plan Goal Alignment: 2	
7	Campaign to end Homelessness	Identify current data systems that will be used as tools for decision makers to make better policy decisions, and help target state programs (food stamps, WIC etc.) toward this population.	
		IT Plan Goal Alignment: 2	

B Top Initiatives

#	Project	Description	State Priority
8	Civil Rights and Labor Management System (CLRMS)	AASHTO (American Association of State Transportation and Highway Officials) is working on a standalone module, Civil Rights Labor Management Software (CRLMS), that meets federal reporting requirements for civil rights and would interface with other Transport modules to reduce the need to prepare manual reports. CRLMS will allow more effective management of an agency's external civil rights and labor compliance activities and functions. Over time, these activities will include employment, prevailing wages, disadvantaged business enterprises (DBEs), minority business enterprises (MBEs), women-owned business enterprises (WBEs), on-the-job training, federal/state reporting and payments.	
IT Plan Goal Alignment: 3			
9	Commercial Services Licensing System	Allow online license insurance application and renewals, monitoring of license compliance and reduce manual business support functions.	
IT Plan Goal Alignment: 1			
10	Construction Permitting System (CPS)	Provide online application and processing to facilitate issuance of construction permits nationwide.	
IT Plan Goal Alignment: 1			
11	Converting the MEAP Exam	Michigan high school students take the MEAP exam to determine if they demonstrate sufficient knowledge and understanding of the state's curriculum benchmarks and standards. Results of this assessment are one of the leading indicators in the No Child Left Behind (NCLB) Adequate Yearly Process (AYP) calculation of school performance. Students also take a college entrance exam, typically the ACT test. This project will provide a replacement test to serve both purposes, a student achievement test and a college entrance exam.	
IT Plan Goal Alignment: 1 and 2			

#	Project	Description	State Priority
12	Create a Fusion Intelligence Center	The system will: support receiving, storing, processing and distributing intelligence to and from agencies at the federal, state, and local level; ensure that queries and responses are processed within homeland security parameters; establish and implement technology for intelligence sharing; coordinate the flow of intelligence data and information; and acquire and maintain access to various government intelligence data systems. The ability to directly work with federal law enforcement cannot be obtained with computer programs. The close and daily contact will allow for more accurate information exchange than search engines.	
IT Plan Goal Alignment: 3 and 5			
13	Critical Information Security Upgrade (CISU)	Provide upgrades to the State's IT infrastructure to limit the risk to zero-day virus attacks and botnets.	
IT Plan Goal Alignment: 3			
14	Cross Boundary Initiatives	The Cross Boundary initiatives include: ✓ Local Government Status Board (LGSB) access to information and notifications of occurrences affecting local government ✓ Michigan Health Information Network (MiHIN) allows health care providers to have improved access to patient health care information at the point of care and allow Michigan citizens to have improved access to their own information. ✓ Michigan Sharing Information and Analysis Center (MI ISAC) provides a central resource for gathering information on cyber threats to critical infrastructure throughout the state and provides two-way sharing of information between and among state and local governments, educational institutions and emergency management entities.	
IT Plan Goal Alignment: 5			
15	C-TRAK (Contract Administration System)	Implement a seamless contract system to monitor and track all service contracts within MDOT.	
IT Plan Goal Alignment: 3			

#	Project	Description	State Priority
16	Data Center Capital Outlay	In the next few years the state of Michigan will require addition space for data center facilities. This project is to create a capital outlay plan for a new data center. The state is researching the possibility of a data center that can be shared with others.	
		IT Plan Goal Alignment: 3 and 5	
17	Data Warehouse – Shared Services	Manage and enhance shared services through the data warehouse as agency participation and demand increase.	
		IT Plan Goal Alignment: 2	
18	Disaster Recovery Planning	Develop disaster recovery (DR) and service level agreements (SLA) between MDIT and state agencies. The agreements will outline detailed systems configuration and DR requirements for every one of the state's 33 critical applications.	
		IT Plan Goal Alignment: 2 and 3	
19	Document Management Program – Shared Services	Currently various state agencies are randomly undertaking document management projects. These projects may not be considering solutions already in place within that agency or other State agencies or how those solutions could be leveraged, in part or in total, for new projects. There is currently no state of Michigan central resource for document management project implementation. This project will develop a State of Michigan document management strategic policy and plan. The plan will take into account the needs and limitations of state agencies and provide options for implementation. It will provide statewide standards /criteria for screening potential document management projects, a recommended screening process and a mechanism for conducting the screening.	
		IT Plan Goal Alignment: 2	
20	E-Discovery Strategy	Assist state Agencies to better understand the new requirements for providing electronically- stored information as part of the discovery process in civil and criminal cases. Assist in determining the state of Michigan's obligation to respond to e-discovery requests.	
		IT Plan Goal Alignment: 3	

#	Project	Description	State Priority
21	e-Manifest – Electronic Manifest Tracking System	Michigan is the project lead for this EPA-funded effort to develop a multi-state electronic tracking system to provide management of waste manifests from initiation to closure.	
		IT Plan Goal Alignment: 5	
22	Field Manager Electronic Approvals	Automate the approval process for certain FieldManager (Construction Field Manager) reports to include the Construction Pay Estimate Report, Contract Modification and Contractor Performance Evaluation. The National Pollutant Discharge Elimination System (NPDES) Inspection Report (MDOT form 1126), in addition to significant user suggested enhancements, will be included in the system.	
		IT Plan Goal Alignment: 3	
23	Field Manager Enhancement – Next Generation	The Field Manager suite of software manages, tracks and processes Michigan's entire $1.4 billion annual road and bridge construction program. More than 2,000 people working at 280 MDOT, local government agencies, engineering consultant firms, and construction contractor facilities across the state use the software. Field Manager allows better management of road and bridge projects by reducing administrative overhead, yielding greater value per taxpayer dollar. It is critical the software operates correctly and is maintained and upgraded to meet changing business needs and updates to technical environments. The purpose of this project is to develop two upgrades to the Field Manager suite. The first is a minor upgrade addressing issues of immediate concern, and the second is a major upgrade containing a variety of improvements. The upgrades include software modifications due to business rule changes, audit requirements, changing technology and standards compliance. The upgrades will also improve performance and reduce long-term maintenance costs.	
		IT Plan Goal Alignment: 3	

#	Project	Description	State Priority
24	FileMaker Database Replacement	Replace the Department of Attorney General's current database system with new information management system (IMS) to monitor, increase accessibility to and report on the department's work. The department needs a new software management system to manage its core mission of providing effective and efficient legal representation to the State of Michigan.	
		IT Plan Goal Alignment: 2	
25	Financial System Study – Next Generation	The study will examine the costs associated with both retaining and replacing MAIN, the State's financial system. It will determine the best course of action for the future of MAIN as it fits into state business: retain and maintain, replace in pieces or replace entirely.	
		IT Plan Goal Alignment: 2	
26	Fleet Management System - MDOT	Develop or purchase an application to provide the department increased ability to plan, track, monitor, analyze and report on fleet information, assets and investments. This includes, but is not limited to, providing a central data repository to track inventory, service, preventive maintenance and cost data for the entire MDOT Fleet including all MDOT-owned and leased/rented vehicles and equipment.	
		IT Plan Goal Alignment: 3	
27	Fleet Management System Upgrade – DMB	Upgrade the current system used by the Department of Management & Budget to manage state of Michigan fleet vehicles.	
		IT Plan Goal Alignment: 3	

#	Project	Description	State Priority
28	Grade Crossing Management System	The Michigan Department of Transportation (MDOT) is responsible for enforcing safety and regulatory initiatives impacting railroad companies and road authorities in Michigan. These laws govern maintenance and installation of traffic warning devices at approximately 5,100 public grade crossings throughout the state. The Rail Safety Section of MDOT's Freight Services & Safety Division (FS&SD) inspects public grade crossings to ensure that each grade crossing is in compliance with Michigan's standards. FS&SD uses the Grade Crossing Management System (GCMS), an automated system for the systematic inspection of public crossings and the electronic collection and processing of condition data.	
IT Plan Goal Alignment: 3			
29	Health and Environment Data Integration Project for Homeland Security	Michigan is the project lead for this EPA-funded effort to develop a multi-state system for managing the appropriate exchange of homeland security related information for emergency response purposes.	
IT Plan Goal Alignment: 5 and 6			
30	Human Capital Management and Employee Development	This initiative primarily focuses on MDIT employees and internship program participants. Professional development and job alignment improves the MDIT work environment and ultimately leads to higher productivity and client satisfaction.	
IT Plan Goal Alignment: 4			

#	Project	Description	State Priority
31	Integrated Forest Management Application	The Integrated Forest Monitoring Assessment and Prescription (IFMAP) project is DNR's landscape inventory and decision support environment. A central feature of this environment is a geographic information system application that brings landscape inventory information and geographic analysis tools to the desktop of natural resources managers. This tool referred to as the IFMAP Geographic Decision Support Environment (GDSE). IFMAP supports sound decision- making on timber sale, so that the state of Michigan forests remain a renewable resource. This application supports a DNR revenue- generating program (timber sale) and the management of the forest and its habitat.	
IT Plan Goal Alignment: 2 and 6			
32	K-20 Data Warehouse	Develop a data warehouse to store information about learners and job seekers collected from a variety of sources, including: student data collected and maintained by Center for Educational Performance and Information (CEPI), job training participation data maintained by DLEG and DHS, higher education student data maintained by community college and university systems and wage record data maintained by the Unemployment Insurance Agency. The data will be stored centrally and securely within a data warehouse. The system will allow tracking of students from K-12 into a post secondary/vocational training setting and then into the labor market. The system will allow for targeted study of programs and initiatives and their impact on improving grade-level achievement, job placement and economic growth.	
IT Plan Goal Alignment: 1 and 5			

#	Project	Description	State Priority
33	Legacy Application Modernization Program (LAMP)	LAMP is a Department of Transportation (DOT)/Department of Information Technology (DIT) strategic initiative. The goal is optimization of MDOT's investment and operational infrastructure to enable business and IT agility. This means modernization of over 100 applications currently in PowerBuilder, FoxPro, ColdFusion and other technologies. Program objectives include moving to current, sustainable technologies that may be delivered to users via internet browser technology. Additionally, this will allow MDOT to deliver applications to users that provide a common look and feel; reducing user learning and time required to maintain applications.	
IT Plan Goal Alignment: 2 and 5			
34	Lawson Software Upgrade	Migration of the human resources application system to JAVA platform for development and production. When completed the Lawson system will be more Web compatible and have additional functionality.	
IT Plan Goal Alignment: 4			
35	Leadership Development Program	This program is designed to provide help and support to leaders at all phases of their careers. The program is based on the theory that everyone is a leader and that differing types and levels of support are needed depending on where they are at in their career	
IT Plan Goal Alignment: 4			
36	Lottery solution upgrade	Upgrade of the Lottery terminal network and services provided. The new application development environment, and associated development tools, will help the Lottery to more efficiently and effectively meet the demanding needs of the Lottery. The effort will also expand the services available to both retailers and players via the Web.	
IT Plan Goal Alignment: 1			

#	Project	Description	State Priority
37	MBT – MI Integrated Tax Administration System (MIITAS)	MIITAS will significantly improve the efficiency of tax processing and tax administration. The solution will enable increased revenue generation, provide the ability to adapt to changes and additions to tax laws, increase voluntary compliance of taxpayers and increase self-service and electronic filing, refunding and payment options.	
		IT Plan Goal Alignment: 1 and 6	
38	MDIT Apprenticeship	Working with Lansing Community College, the program provides students the ability to work for the state of Michigan and gain hands-on experience. This is a win-win for all sides as it provides the state with technology talent and allows students to gain credits while working.	
		IT Plan Goal Alignment: 4	
39	Medicaid Management Information System (MMIS) – CHAMPS	Replace the existing MMIS for the state of Michigan. The Medicaid Management Information System was first developed in the late 1970's. It is a batch COBOL system running on the BULL mainframe. The object of this project is to replace it with a system that is certifiable by the federal government and run with current software on a more current platform. This will allow DCH to make enhancements and changes requested by both the federal government and the state in a timely manner, with most done by the business area through table updates. Online tools will be added that will give providers the ability to enter claims, update their records in the Provider Enrollment area, etc.	
		IT Plan Goal Alignment: 2	

#	Project	Description	State Priority
40	Michigan/1 (M/1)	MDIT was formed to mitigate the issues associated with the autonomy and diverse directions pursued by the individual departments and agencies when implementing information technology initiatives. Michigan/1 is one of the MDIT efforts toward achieving this objective. By establishing the framework for the utility computing environment through desktop standardization, messaging consolidation, an integrated and scalable directory service for providing authentication and a standardized file and print environment, MDIT has developed the basis to leverage equipment, people, processes and tools. The overall purpose of Michigan/1 is to set direction.	
IT Plan Goal Alignment: 3			
41	MI e-Grants	Provide a citizen portal for all grants in the state to allow search and find grants that are available.	
IT Plan Goal Alignment: 1, 5 and 6			
42	Michigan Business Services improvement initiative (MBSii)	Create a one-stop shop for businesses. This effort will eliminate multiple, disparate agencies and sources of information that exist for businesses to obtain information and interact with to obtain requisite licenses/permits to operate in the state.	
IT Plan Goal Alignment: 1 and 6			

#	Project	Description	State Priority
43	Michigan Prison Re-entry Initiative (MPRI)	MDOC has adopted a new model of custody and supervision for the nearly 70,000 prisoners and parolees under its jurisdiction. Dubbed MPRI, the model is based on sound scientific research that demonstrates targeted supervision strategies coupled with carefully crafted treatment interventions to "produce sustained reductions in (offender) recidivism." The assessment system must not only reliably predict the offender's risk to recidivate, commit violent acts, comply with supervision rules or abscond from supervision, but must also accurately measure and prioritize the offender's ciminogenic needs that must be addressed during custody and supervision to reduce the identified risk. With an assessment tool in place that meets these criteria, MDOC will have the ability to identify target populations for specific custody and supervision strategies and treatment interventions.	
	IT Plan Goal Alignment: 2		
44	New MERIT Award	This effort will enhance the staying power of students in post-secondary education settings by shifting MERIT payments to after successful completion of two (2) years of college or career training. It will also increase the employability of Michigan residents and expand the economy of the state.	
	IT Plan Goal Alignment: 1		
45	Offender Network Management Information (OMNI)	A parole/probation tracking system that will transition the Department from a manual, individual investigation/supervision system to an automated, department-wide system. In addition to automating the majority of investigative and supervision tasks and responsibilities, OMNI will incorporate case management information for over 50,000 probationers and expand the information maintained on parolees and prisoners under community supervision. OMNI will also serve as the base for a prisoner-tracking information system to replace the CMIS mainframe application.	
	IT Plan Goal Alignment: 2 and 5		

#	Project	Description	State Priority
46	Program/Project Management System (P/PMS)-Replacement (MDOT)	P/PMS schedules, monitors and reports the tasks and milestones involved in the Department of Transportation's pre-construction plan development process. Information is available at a project and program level. The project will determine if there is a Web-based system with the capability to replace the functionality currently in P/PMS.	
	IT Plan Goal Alignment: 3		
47	Retail Sales System Upgrade	Enhance current DNR services provided to citizens.	
	IT Plan Goal Alignment: 1		
48	Security for the Mobile Worker	Expand past the current network-attached laptop/docking station in a workers office to a variety of mobile devices that allow e-mail access up to a total package of items that can access state applications, printing and scanning along with Internet and state network access. The solution will include the link into the first phase of endpoint security.	
	IT Plan Goal Alignment: 3		
49	Security – Training and Culture	Criteria, curriculum, and guidelines for end user security awareness training and technical system administrator training	
	IT Plan Goal Alignment: 3 and 5		
50	Self-Service Stations	Expansion of the kiosk delivery channel to accommodate other public services into one device.	
	IT Plan Goal Alignment: 1		
51	Single Sign-On – Identity Management	Simplify user access to the state's application systems through the use of single sign-on portal. This portal will provide each user a single user ID and password access for entry to major application systems. Single sign-on will provide enhanced security for our computing environment and simplify our support efforts in user ID and password management.	
	IT Plan Goal Alignment: 3		
52	Statewide Case Management for Administrative Hearings	Provide a single, standardized system to manage administrative hearings in several departments.	
	IT Plan Goal Alignment: 2		

#	Project	Description	State Priority
53	Streamline Commodity Purchases	Provide a Web-based IT commodity tracking tool to manage IT commodity purchases. The effort will encourage the purchase of standard or commonly-purchased products through expedited request and approval mechanisms. This will allow end users and stakeholders to find the status of each request and track metrics of time spent in each functional area of the procurement process.	
IT Plan Goal Alignment: 3			
54	Streamline Service Purchases	Streamline service purchases by utilizing an agreed-upon IT statement of work (SOW) template that will clearly identify work to be performed, time frames, outcomes and deliverables and cost. The business requirements will be incorporated into the new SOW templates. Implementation of a risk assessment template and risk assessment plan will be used for new contracts/projects. This risk assessment will help the contract office determine bid process, evaluation method, negotiation strategy and level of project and contract management. This process will involve DMB buyers earlier in the SOW development and pre-award processes.	
IT Plan Goal Alignment: 3			
55	Succession Planning	By identifying trends and projections for potential employee departure, succession planning is MDIT's effort to plan for continuity of operations by developing in MDIT employees the skill sets that will be required to meet future departmental needs.	
IT Plan Goal Alignment: 4			

#	Project	Description	State Priority
56	State Unified Information Technology Environment (SUITE)	Bring the Michigan Department of Information Technology (MDIT) systems development areas up to CMMI Level 3 compliance to ensure consistent process usage throughout the organization. This includes using the same Project Management Methodology (PMM), Systems Engineering Methodology (SEM), process management and supporting processes across all systems development areas within MDIT. The overall goal of SUITE is to integrate project management, systems engineering, process management, and supporting processes into a single unified environment.	
IT Plan Goal Alignment:			
57	Telecom 10%	Based on an Executive Directive, this effort will reduce telecom expenditures by 10% (approximately $6 million).	
IT Plan Goal Alignment: 3			
58	Time and Expense	Evaluation of the current state employee time- keeping and expense-reporting systems to determine future requirements and enhancements.	
IT Plan Goal Alignment: 3			
59	Unemployment Insurance Agency System Re-write Phase 1 – Business Requirements Gathering	Michigan's unemployment systems will be redesigned to better share information between the tax, benefit and wage-reporting components. This project replaces technology, which was incrementally developed over ten years, with a unified system architecture that will be easier and less expensive to maintain and support.	
IT Plan Goal Alignment: 3			

#	Project	Description	State Priority
60	Vehicle Information Integration VII	This technology is also related to intelligent transportation systems (ITS). Generally, the technology manages information about vehicles, the road traveled, area traffic signals, etc., to provide a number of applications where drivers can be informed to avoid possible crashes, congestion, etc. Various nationwide task forces have identified hundreds of possible applications of this technology to improve transportation systems and safety. Building these applications and employing this technology involves sharing information from internal vehicle sources (like OnStar and similar systems), traffic signals, other vehicles, state and local jurisdictions, road sensors, etc. So far, Michigan has been a leader in this technology and we are positioned well to further develop the technology, with the potential to generate a significant number of high tech research and technology jobs in the field.	
IT Plan Goal Alignment: 1 and 6			
61	Videoconferencing	Videoconferencing (also known as a video teleconference) is a meeting among persons where both telephony and video technologies are utilized simultaneously. Video- teleconference communication is multi-way and synchronous, as it would be if all parties were in the same room located in various locations and managed by different agencies. This effort consolidates and leverages videoconferencing capabilities across the state.	
IT Plan Goal Alignment: 3			
62	Video Streaming	Video streaming is playing video immediately as it is downloaded from the Internet, rather than storing it in a file on the receiving computer first. Streaming is accomplished by the way of Web browser plug-ins, which decompress and play the file in real time. This technology currently exists and is being used in the Michigan.gov Web site. This effort will identify business areas that can benefit from this technology.	
IT Plan Goal Alignment: 1			

#	Project	Description	State Priority
63	Vision and Values Initiatives	This is an ongoing effort within MDIT and is coordinated with Governor Granholm's Executive Branch Values Awareness Alignment and Performance Management initiative. This provides guidance in aligning employees' personal values, interests and skills with enterprise values.	
		IT Plan Goal Alignment: 4	
64	Vision ORS	Replace outdated technology and manual systems at the Office of Retirement Services (ORS). It includes a Web front end and provides significantly better customer service for retirees. In phase III of this project, self-service functionality will be added to the retirement benefits system. Also, the development and ongoing maintenance of this system, which is currently supported by an external vendor, will be in-sourced.	
		IT Plan Goal Alignment: 3	
65	Voice over Internet Protocol/Voice Consolidation	Michigan is evaluating a VoIP solution because of the aging of our legacy telecom system. In addition, consolidating voice and data networks will reduce costs. Savings would come from long distance service savings and single network infrastructure savings. The technology will improve productivity and: provide management and support savings - one staff to manage both voice and data; adding and changing phones become simpler, often accomplished via a software application versus a technician visit; and enhanced mobility, - calls reach users immediately, even when out of the office.	
		IT Plan Goal Alignment: 3	
66	Web Self-Service	Enhance the Department of Management & Budget's current self-service delivery channels offered to it's partners.	
		IT Plan Goal Alignment: 1	

#	Project	Description	State Priority
67	Wireless Infrastructure	MDIT offers a wireless (WiFi) service to state employees in managed facilities. This service is ideal for sites that cannot use standard building wiring due to building codes, historical considerations or the cost prohibition of providing wired connectivity. A few of the many benefits of wireless service are rapid deployment, easy installation and the greatly reduced cost of network deployment. Additional requirements are SecureID authentication and a virtual private network (VPN) to connect to the state of Michigan network.	
IT Plan Goal Alignment: 3			
68	Women, Infants and Children (WIC) System Replacement	Replace the existing WIC MTRAX system for the state of Michigan. The MITRAX system is a batch Cobol system that was first developed in the early 80's. The object of this project is to replace the MTRAX system with a system running current software on a more current hardware platform.	
IT Plan Goal Alignment: 2			

Strategies & Targets

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C Strategies & Targets

Strategy and Target Selection Process

Michigan's IT Strategic Plan and the six goal areas are operationalized through a comprehensive portfolio of targets and strategies. Initially, the MDIT director and executive team reviewed all pending initiatives from previous planning cycles and determined which projects should carry forward as part of the new planning cycle. Executive "owners" were assigned to each of the six goal areas based on areas of expertise. Goal owners assembled goal teams that identified changes and new strategies needed. The full executive team provided additional review and changes before presenting a final package for review by the Strategic Management Team. Agency survey feedback, agency business drivers and MITEC Strengths/Weaknesses/Opportunities/Threats (SWOT) exercise information was also utilized. Further information on Michigan's system for IT target and performance tracking can be found in Appendix A.

Goal One-Strategies and Targets

Access: Expand Michigan's services to reach citizens and businesses anytime, anywhere

Goal one is about providing opportunities for anyone, anywhere, to utilize our services and information resources. Improving access means increasing our technical capabilities, expanding the number of online services and managing information to enhance our presence in existing online communities. It also means engaging citizens in decision-making and delivering these services in a manner that protects the privacy and security of every citizen.

Key Strategies

- Provide Michigan citizens and businesses with one simple access point to government services
- Optimize technology to transform how government offers services

Targets

2008

- Launch accountability portal for government spending and statistics

2009

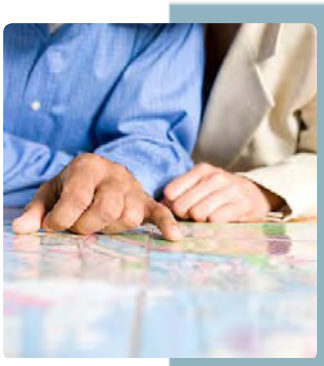
- Fully implement Web 2.0 technologies within Michigan.gov and assist agencies in understanding potential uses and implementing technology
- Pilot next generation ATM-style kiosks that can use biometric thumb or finger prints to authenticate users which enable more services to be offered outside of traditional government locations
- Implement the Michigan Business Services improvement initiative (MBSii) one-stop business portal

Ongoing

- Expand use of search technology, making government information accessible directly from major search engines
- Enable secure communication and transactions with citizens via mobile phones: providing text alerts, real-time video and payment services
- Integrate Web 2.0 capabilities to enable better collaboration with external partners and identify management tools to allow secure and direct access to administer programs more efficiently
- Add new mobile technology enabling government employees to be connected from non-traditional work locations and allowing agencies to bring their services more directly to citizens

Goal Two-Strategies and Targets

Service: Deliver efficient and effective technology services and shared solutions to the agencies



Providing service to our agency partners is a critical success factor for Michigan's Department of Information Technology. Meeting and exceeding client expectations is accomplished through actively listening and responding to customer needs as well as proactively offering opportunities to share resources, increase government efficiency and improve workflows.

Key Strategies

- Create efficiencies for our agencies in support of their existing systems
- Improve quality of service and enhance accountability to our customers
- Maximize the value of IT investments

Targets

2008

- Automate procurement of commodity and service technologies
- Tighten the partnership with our Michigan Information Technology Executive Council (MITEC)
- Design and implement a new budgetary tracking and financial reporting system
- Provide computer leasing options

2009

- Enhance agency-specific service level agreements to include MDIT performance measures

Ongoing

- Work cooperatively to strategize and determine two new shared services each year to reduce agency costs and help improve agency effectiveness
- Complete full application architecture roadmaps
- Continue to implement the State Unified Information Technology Environment (SUITE) processes to achieve Level 3 Capability Maturity Model ® Integration (CMMI) compliance
- Incorporate portfolio management for IT investments; improve the information available for client investment decision.

Goal Three-Strategies and Targets

IT Management and Infrastructure: Improving operations, security and reliability through statewide solutions and universal standards

Today, it is more important than ever to be responsible stewards of our limited resources. Delivering projects is no longer enough. Over the next five years, we will work to enable even more dependable, agile and leading-edge IT operations across state government. We will continue to refine our standards and architecture, reinforce our infrastructure and protect our physical and information resources.

Key Strategies

- Continue evolving Michigan's technology standards and architecture to reinforce robust forward-moving operations
- Utilize best practices in the management of IT assets, including hardware, software, data, systems and applications
- Provide optimal levels of security and citizen privacy

Targets

2008

- Became one of the first states to achieve Payment Card Industry (PCI) compliance in 2008; maintain rigorous security standards on all critical systems and servers moving forward

2009

- Develop an information architecture strategy to enable data sharing and advanced analytics, including fraud detection and issue resolution
- Implement Service-Oriented Architecture (SOA) standards
- Implement strategic staff sourcing for technology projects
- Improve the functionality of our data centers; reduce costs and implement a green strategy through improvements and increased virtualization
- Implement next-generation security practices and fully integrate a proactive processes to ensure that viruses are stopped

2010

- Provide robust security for the State's mobile endpoints
- Complete the development of a comprehensive disaster recovery plan to cover 100% of mission critical applications

2011

- Finalize long-term data center capacity solution

2012

- Improve our system development processes to achieve CMMI Level 3 compliance enterprise-wide
- Provide 99.9% service availability for all mission critical applications in the data centers

Ongoing

- Update technology lifecycle roadmaps every six months and invest appropriately

Goal Four-Strategies and Targets

Great Workplace: Support a high-performance workforce

Government technology is a rapidly changing landscape. To succeed in serving our agency partners and our customers, we must attract and retain the best technology talent by consistently striving to provide an engaging and stimulating workplace. This includes not only offering employees meaningful work, professional development and expanding career potential, but also pride and a commitment to the work they do.

Key Strategies

- Recruit, retain and recognize a diverse, high-performing technology workforce
- Establish standards and procedures requiring and equipping a high-performance workforce
- Support, enable and help drive Michigan's IT plan goals and strategies through our IT workforce
- Support a culture where employees take pride in, and responsibility for, delivering exceptional service

Targets

2008

- Attract and retain a competency-based, high-performing workforce: Develop a modern, ongoing recruitment program including an MDIT brand identity

2009

- Develop a strategy for succession and workforce planning

2010

- Implement succession and workforce planning strategy

Ongoing

- Work with Civil Service to streamline the selection process and decrease the time it takes to fill positions
- Partner with Civil Service to modernize and standardize the classification and pay structure for IT professionals to support attracting and retaining a high performing IT workforce
- Refresh our recognition and award programs
- Implement best practice workplace tools and technologies and provide a work environment that challenges IT professionals and leverages their expertise
- Provide team-building activities and other opportunities for employees to get to know each other and work together more effectively
- Provide relevant and timely technical, behavioral, project management and certification training opportunities to foster department-wide innovation and excellence
- Mature our management capability around best practice standardized IT processes to advance efficiency and effectiveness across the enterprise, including strategic portfolio/contract management, systems development lifecycle, Application Portfolio Management and the Information Technology Infrastructure Library (ITIL)
- Enhance leadership development opportunities for formal and informal leaders
- Support a culture of integrity, innovation, accountability and excellence within MDIT that guides our daily behavior and decision making
- As stewards of the public trust, state IT employees will be properly trained to protect both physical and information assets
- Continue to enhance and administer the annual leader assessment and feedback tool, MI-360, to provide leaders with an opportunity to receive feedback and to make improvements
- Participate in the annual SOM Vision & Values survey and utilize the results to promote shared statewide values: integrity, excellence, inclusion and teamwork

Goal Five-Strategies and Targets

Cross-Boundary Solutions: Foster partnerships across and beyond state government

Michigan is fully engaged in using technology as a change agent for cross- boundary innovation. Whether through a local and state cross-boundary technology steering committee, a network of health care professionals, or a group of vendor partners, we are identifying and solving difficult issues across organizations. We will continue to expand this network of partners and identify new initiatives that will aid the State of Michigan and our partners in delivering better services to customers and citizens.

Key Strategies

- Create innovative public partnership programs for more effective and efficient government across all levels
- Strengthen and expand partnerships beyond government to the private sector and higher education
- Leverage existing and emerging IT infrastructure and functionality across the state
- Expand health information technology and health information exchange programs and partners

Targets

2008

- Identify five initiatives for the Steering Committee to implement
- Work with partners to increase broadband coverage and adoption rates with a new interactive Web site
- Provide a resource for local communities and vendors to obtain grant and loan information, facilitating the expansion of telecommunication infrastructure into underserved areas of Michigan

2009

- Further reduce travel by expanding the use of videoconferencing and Web conferencing through all levels of government

2010

- Work with partners to increase affordable broadband coverage and adoption rates by holding awareness/ information activities throughout the state

2011

- Coordinating with the Department of Community Health and the Michigan Public Health Institute, successfully implement $20.9 million Federal Communications Commission award to connect over 390 rural hospitals and medical clinics via broadband

2012

- Enable real-time mashup between state and local government as well as private sector information

Ongoing

- Further evolve the local and state government Cross Boundary Technology Steering Committee to develop policies, procedures and funding, facilitating initiatives among all levels of government
- Implement infrastructure, application and resource sharing between government levels, where appropriate, to reduce costs and provide better services
- Research the feasibility of a partnership with the private sector to build a state-of-the-art data center that not only fulfills our mutual capacity needs, but also provides an economic development opportunity for Michigan
- Continue to develop and foster strong strategic vendor relationships
- Assist HIEs with planning and implementation strategies and support
- Provide medical trading areas with recommendations, privacy and other standards and best practices on health information technology

Goal Six-Strategies and Targets

Innovation and Transformation: Drive innovative processes and technologies to transform Michigan's government service

Together with our agency partners, we are rethinking technology and processes, challenging the status quo. In collaboration with the public and private sector, we will make both small and large-scale modifications and improve the way that services are delivered and the types of services possible and available. This effort will drive a systematic approach to innovation and transformation.

Key Strategies

- Fully realize customer needs and build a culture supporting change, innovation and excellence among employees and partners
- Develop governance, change and portfolio management processes and standards to support, enable and drive the transformation of existing and the development of new services
- Employ best practices to improve government services through information, communications and technology

Targets

2008

- Establish an Innovation Advisory Board to provide advice and support
- Foster a culture of innovation and thinking from the customer's perspective and, through practices like job-shadowing, become routinely involved in customer activities, getting to know their business needs first-hand
- Develop high performance, process change competencies by providing relevant technical, project management and organizational change management training, education and certification opportunities to state IT employees on an ongoing basis
- Establish formal performance tracking and monitoring capabilities to ensure transparency, identify and manage change opportunities and to report on and manage performance
- Utilize Government Performance Project (GPP) and Pew Center on the States best practices information and related resources in developing and implementing Michigan solutions aligned with structural change, each category of the Cabinet Action Plan and Government Performance improvement initiative (GPii) priorities
- Create a Michigan Centers for Excellence Framework aligning individual Excellence and Competency Center goals, strategies, activities and internal and partner resources with annual realignment and refinement

2009

Develop a minimum of one new initiative each year in priority areas such as health, education and economic development

Create an enterprise-level Project and Portfolio Management Office to strengthen and formalize the project, portfolio and change management process

- Implement an innovations and best practices tracking, assessment, design and management capability
- Formalize process for changes and improvements in state government projects
- Refine enterprise architecture and the information architecture capabilities to support innovation/transformation
- Develop Michigan information framework, integrating business intelligence and other related initiatives and refine information architecture

Goal Six-Strategies and Targets (Cont.)

2010

- Formally begin sharing project management capabilities with local governments
- Formalize IT investment planning and management in the project, portfolio and change management process
- Launch a citizen service improvement initiative to deliver all government services through one common Web interface

Ongoing

- Develop a minimum of one new initiative each year in priority areas such as health, education and economic development
- Implement standards and processes for utilizing information and knowledge as driving strategic resources to technology
- Develop shared work plans with the Michigan Department of History, Arts and Libraries (HAL), Michigan e-Library and university systems (Public Sector Intellectual Capital Framework)

Technology Solutions

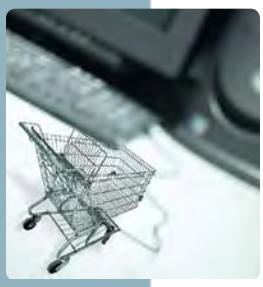
Table of Contents

Michigan's Technology Solutions

Exploring the Technology Possibilities: 2008-2012

Michigan's IT strategic planning process has consistently included an evaluation of reported research and review of new technology developments. This segment of the plan includes an assessment of a full range of current and emerging technologies feasible and appropriate for state implementation.

Our assessment has been accomplished through information gathering from a variety of sources - from thorough review of research papers by objective analysts such as Gartner, Inc. and Forrester Research, Inc., to one-on-one sessions with experts to learn their advice for Michigan-specific implementations. The findings and recommendations of this process are presented to Michigan's IT decision-makers who then work with the Michigan Information Technology Executive Council (MITEC) and other stakeholders to determine the technologies to focus on in the coming years.



Streamlined Citizen Transaction and Self-Service

Identify and implement the latest technologies to make government services more accessible to citizens and businesses.

A key focus of this solution is the creation of a true "e-Government," where all citizens can access the government services they need quickly, efficiently and securely. This approach emphasizes single-points of access to government services through multiple channels and a continuing commitment to making existing e-government services faster and easier to use.

According to the Pew Internet and the American Life Project, 73% of American adults - and 93% of teens - are internet users; 70% of Americans connect via high-speed internet (mostly cable modem or DSL). Along with this access comes the expectation for on-demand, self-service options for doing business with state government. This expectation will only increase with the accelerating use of technology as the primary tool for social and business connection.

These new citizen demands are not just focused on online services. Self-service is increasingly commonplace in other parts of our daily lives. Whether it's using an ATM to get cash at midnight, a kiosk to check in before a flight, or paying at the pump as you fill up your gas tank, self-service is an increasingly vital way to do business.

Just like in the private sector, Michigan citizens will continue to demand that their government provide them with convenient, cost-effective and secure service around the clock.

Opportunities for Michigan

- Better service for citizens

  The desire by public agencies to provide information and services on the Internet opened a way for Americans to contact government that was not available a decade ago. The benefits include expanded information flows between governments and citizens. Citizens benefit from increased access, whether they live in the Upper Peninsula or Detroit, work 8 to 5 or the graveyard shift or they're on their home computer or a laptop at a state park.

- New cost savings

  As Michigan continues to wrestle with tight budgets, streamlined citizen transaction and self- service can promote cost savings through reducing employee work hours devoted to providing certain services. E-government efficiencies can also enable the State of Michigan to better cope with its smaller workforce. For example, Michigan receives an average of 22,000 business registration applications per year, all of them on paper. The new online e-Registration for Michigan Businesses allows employers to create a single electronic document that satisfies tax registration requirements for multiple agencies, spanning six specific tax registrations (unemployment, sales, withholding, tobacco, motor fuel, single business). This not only improves services to Michigan businesses, but also frees up state employees to perform other important tasks.

Current Status

The State of Michigan now offers a variety of self-services; whether it be from home through the Internet or on the telephone, while using a wireless device remotely or in person through a kiosk. Examples of services currently available include:

- Drivers license and vehicle registration renewals using kiosks
- Online campsite reservations
- Fishing licenses via mobile phone
- Online permitting

One of the major challenges for government is to understand how citizens use services in order to increase their use of online services. It's not enough to drive citizens online. Government must adapt its internal processes and overcome its traditional structure to allow for inter- and intra-agency collaboration.

Another challenge is that moving toward self-service requires an infrastructure that supports electronic payments. While this can bring cost-savings – both from efficiencies and per-transaction – it also means investing in solutions and processes with a high-level of security.

Next Steps

There are many opportunities to expand citizen access to state government services in various stages of development, whether it be in the vision stage or in the process of implementation. Examples include the One Stop Shop Business Portal or the Parolee Tracking Kiosk, which are currently in the design phase. Both of these will provide for more efficient and effective service to citizens, while reducing the cost to provide these services.

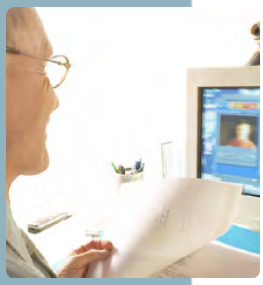
Citizen transaction and self-service will grow in the coming years. Michigan is pursuing and investigating technologies that enable self-service, including centralized contact centers, self-service stations and online Web portals. As technology advances and can handle more complex interactions, more constituents will be comfortable using technology as their primary point of contact.

MDIT is working with its 19 client agencies to explore which projects would benefit most from these technologies to improve productivity and efficiency.

Citizen Engagement Tools

Identify and implement the latest technologies to engage citizens in government operations and decision-making.

A key IT challenge around citizen engagement is selecting secure citizen interfaces that will improve end-user experiences and provide the state with meaningful citizen participation, leading to better decision-making. Other challenges include maintaining control of information and security and retaining knowledgeable staff to manage the outreach and engagement efforts.



The Web has opened endless possibilities for engaging with the public, however, the benefits of using the Web for citizen-government interaction have not been clearly documented. Some changes are measurable and evident, such as the recent shift away from "service-oriented" architectures toward "Web-oriented" architectures. Governments are beginning to look at how mashups and other information forums can take the more granular information from government sources, and allow it to be used by others.

Opportunities for Michigan

- Building public trust

  By providing information, asking for opinions and meeting with people in the communities where they already live, government increases its relevance and can develop the public's trust by being open and inclusive.

- Shaping policy

  Through the use of surveys, blogs or wikis, we can gather comments on proposed laws or work with citizens to cooperatively develop policy, leading to better decision-making. Using the Web for broad-reaching e-government efforts can boost the engagement of citizens with the democratic process.

- Gathering service feedback

  Agencies and citizens can use ratings or blogs to provide feedback on service levels and provide comment before services are designed. This will lead to a broader range of choices and targeted services for our citizens.

- Promoting government services

  Too often, government simply puts information out for "consumption" by the public. Some states, such as Utah, are promoting tourism and other government services and benefits through You Tube and other Web sites. Web 2.0 technologies also offer new opportunities to expand government's reach. For example, collaborative tagging is practice of cooperatively managing tags which allows citizens to create new associations and ways to navigate government information and engagement efforts.

Current Status

Michigan has several existing citizen engagement tools including survey software, syndication (RSS) feeds, and blogs that encourage citizens to focus on specific areas. We are also working with newer Web-based "social computing" environments, such as using Wikis to garner feedback on educational decision points.

In part through MDIT's past efforts to improve accessibility, expand delivery channels, share data across governmental agencies and public engagement, Michigan's web portal was ranked #5 among states in a 2006 Brown University study. Today, our contact with citizens continues to grow with Michigan.gov, which logged 380 million average monthly hits in 2006. The portal offers 121 live Web sites, with more than 200 online services. Some of this content is accessible via handheld devices, such as reports of beach closings, ozone alerts and lottery information, and we are working to do more.

The lists below documents additional ways we have used technology to reach out to our citizens and actively engage them in government:

Participation in surveys on a number of government decision points

Current Examples:

- DNR Hunting and Trapping Activity Surveys
- Michigan Tax Tribunal Survey
- Bureau of Construction Codes Training Survey
- Home/Renters Insurance Web Pages Survey
- MIOSHA Web site Survey
- MITEC Strategic Planning Survey
- Licensing Web site Survey
- Auto Insurance Web Page Survey
- Workforce Development Survey

Participation in Blogs and seeking feedback through Wikis

Current Examples:

- MDA licensing consolidation Blog
- Sustainable green chemistry Blog
- Seeking curriculum feedback via Wikis
- Using Wikis to gather student data
- Agriculture & food safety issues Blog
- Workforce retention Blog
- Health careers Blog
- Hydrology issues Blog

Asking citizens for assistance and feedback

Current Examples:

- Submit Your Best Shot - Soliciting great Michigan images for posting on the portal
- Reporting abuses against children and locating missing children
- Reporting domestic abuse, school violence

Offering information to citizens through, RSS feeds, podcasts, alerts, text messaging and videos

Current Examples:

- DEQ news and announcements RSS
- DNR hot hunting topics RSS
- MDA food recalls RSS
- Governor's weekly podcast
- Text messaging on lane closures
- Hunting season dates via text message
- Cyber security RSS
- Taxes-Michigan Business Tax RSS
- Weather and road condition alerts
- E-Citizens resource pages

Next Steps

Citizen engagement is an ongoing effort because technologies and the needs of citizens are always changing. We will take the following next steps to make sure that we are using technology to do everything we can to reach out to our citizens, through safe and accessible channels.

- Complete an inventory of all citizen engagement activities underway in Michigan government to assist agencies in meeting business drivers
- Identify an MDIT liaison to focus on citizen engagement opportunities and to serve as a resource to the MDIT information officers
- Expand the scope of the MITEC Citizen Self-Service Committee to include citizen engagement technologies and recommendations
- Work within the new Innovation and Information Technology Advisory Board (Goal 6) to evaluate and report on the Web 2.0/3.0 opportunities for citizen/government engagement

Shared Technology Infrastructure

Share and integrate infrastructure resources between public and private partners, such as data centers, servers and connectivity through fiber, wireless and other communications capabilities.

In Michigan, prior to the formation of the Department of Information Technology, information technology was developed independently in the various agencies within the state. As the agencies made individual decisions of technologies to use and how to maintain or upgrade them, the statewide technology infrastructure grew increasingly complicated. This diverse infrastructure of computers, telephones, information storage devices and computer programming methods prevented Michigan from realizing the optimal value of information technology.

With the advent of MDIT, Michigan has worked aggressively to build a unified technology infrastructure that is well-coordinated, interoperable and universally available. For state government, a shared technology infrastructure is steadily evolving as the primary structural foundation that links and empowers all operations.

Opportunities for Michigan

Through a shared technology infrastructure, the benefits are many....

- Seamless information accessibility
- Improved return on investment
- Reduced operations risk
- Lower cost of ownership
- Technology resource maximization

Whether it is providing a one-stop call center for citizens to access state services quickly and securely or giving state employees collaboration tools like real-time, online meetings to cut down on travel time and cost, a shared technology infrastructure is delivering the promises of tomorrow for Michigan.

The state of Michigan benefits not only for immediate reasons such as cost savings and service improvements, but also in that future technology applications will require a modern, integrated infrastructure. Some of the future opportunities that will build on the integrated infrastructure include:

- Contact centers: An enterprise contact center strategy, where Michigan citizens can contact state government via convenient channels, relies upon having standard phone and computer systems. State employees, at various physical locations, will be available to answer citizens' needs at the touch of a phone or click of a computer mouse. In order to truly function as one face of government, those employees' phone and computer systems must be able to communicate effectively using standard technology system designs.
- Unified communications / messaging: As citizens increasingly turn to alternative communications channels such as e-mail and Web access, state employees will need the ability to simultaneously respond with various media. Standard, interoperable technologies will enable employees to monitor and use telephone, e-mail and Web interfaces as easily as traditional face-to-face interactions.
- Virtual teams: Government employees will have to collaborate, across agencies and locations, in order to most efficiently deliver the services that citizens demand. The technology tools that will allow these employees to share data and information will require that an integrated infrastructure provides the link among all agencies statewide.

- Mobile work force: As more state employees work outside of a typical office environment or work from multiple offices, new technologies will be adapted to enable the mobile worker. A worker will carry her telephone number with her, having immediate access to a phone line anywhere she connects her computer to a network. She will have access to any state application she needs, from any state building or from home. She will be able to check e-mail via the telephone. All of these capabilities are built on the foundation of a modern, integrated infrastructure.

Current Status

Michigan continues to build its comprehensive approach to shared technology infrastructure on many different levels within state government. Two initiatives in particular are driving Michigan's overall strategy:

- Centrally-managed voice systems

  Providing central management of voice systems throughout state government enables economies of scale in the purchase of equipment and provision of support to state telephone systems. A consistent implementation of telephone systems across agencies also allows systems to work together, ensuring that call and voicemail transfers are seamless across state government. Finally, central management of voice systems provides an opportunity to move the state's system forward with new telephone technologies, such as Voice over Internet Protocol (VoIP), that provide the foundation for contact centers, mobile workers and many other trends for how government does business.

- Michigan/1 program

  Michigan/1 is a vision for the baseline infrastructure of the state's computing environment that merges 19 separate agency environments into one, resulting in reduced costs and improved services. Program components include:

  - Active Directory office platform technology (ADOPT): Provides a common technology set up for offices across the state, including standardized computers and the capability to remotely update or fix computers
  - Messaging consolidation: Brings all state e-mail users into one of two common e-mail installations, and redesigns all state e-mail infrastructure for optimal cost-effectiveness
  - Storage / backup: Provides shared solutions for storing the state's data and protecting it with back-up procedures
  - Hosting center server centralization: Consolidates data centers across the state in three state-of-the-art, centralized data centers
  - Enterprise metrics monitoring: Tracks state systems automatically, alerting staff when repairs are necessary

Next Steps

Michigan will continue to explore new opportunities for shared infrastructure between state agencies and in collaboration with other public and private partners. With state government, key continuing initiatives include:

- 18,000-20,000 Michigan/1 Adopt standardized desktop packages rolled out by Spring of 2008; complete roll out by end of 2009
- 75% of all state offices converted to Voice over Internet Protocol (VoIP) technology by 2012
- Unified approach to communication and collaboration tools
- Continue data center consolidation
- WiFi available to all state locations in 2008
- All cellular contracts managed centrally by 2010
- Centralized and standardized LAN solution for 50% of state users in 2008
- Call Center Consolidation

Information Collaboration and E-Discovery

Facilitate the sharing and integration of data among departments to leverage information and to enable quicker and more effective decisions; effectively manage the storage, preservation, and retrieval of electronic information as it relates to governmental operations.

The state of Michigan's executive branch consists of 19 separate departments and multiple agencies. Core services include those that directly benefit constituents and include policy and program development and administration, as well as the actual delivery of services. Common administrative services include those that are necessary for government to function, such as finance, human resources and procurement.

Over the past decade, these disparate departments have begun to interact and collaborate on projects, initiatives and policy direction. Driven by the governor's statewide priority areas, all 19 state departments have come together to work toward a statewide vision of goals.

The breaking down of old barriers between government agencies has greatly increased the need for common methods of communicating, sharing and bringing information to decision makers. Through overall advances in information technology – and as Michigan develops its own unified approach to information access and collaboration services – departments and agencies will better understand what information is available and be able to get the information they need when they need it. Having a coordinated strategic approach will enable state leaders to make timely and better-informed decisions.

Additionally, recent changes to the Federal Rules of Civil Procedure (FRCP) governing standards for managing electronically-stored information, and the increasing number of lawsuits related to discovery of government information, require the development of a legally-constructed and consistent enterprise-wide approach to e-discovery.

Opportunities for Michigan

The potential benefits to Michigan from increased data sharing, integration and a consistent e-discovery protocol are many and include:

- Improved Communication: For the State of Michigan, one of the most important benefits from integration is the improvement of communications between departments, agencies and even among workers within their own agency.
- Improved Decision Making: As a direct result of improved communications and up-to-date information access, key managers and personnel will be able to make proactive and reactive decisions faster and more accurately.
- Enhanced Service Delivery: Across the spectrum of involvement within state government, the ability to easily access reliable and accurate information is essential. By sharing across programs, agencies and even other governments, the State of Michigan will have better information to use in providing improved service to the citizens, businesses, governments and employees it serves. A coordinated and enterprise-wide system for e-discovery will enable Michigan to quickly respond to meet judicial requirements and avoid sanctions.

Current Status

Already, Michigan is actively engaged in improving information access and collaboration. Some notable examples of the state's progress include:

- Teradata Warehouse: The State of Michigan currently is sharing over 2 terabits of information, which equates to approximately one-tenth of all of the books in the largest library in the world, between five state agencies.

- Child Support Enforcement System (CSES): Agencies continue to develop data-sharing agreements for projects that involve multiple agencies. One key example is the Child Support Enforcement System (CSES), which currently shares information between Department of Treasury, court systems, Department of State and Department of Human Services to ensure that child support payments are paid on time.
- Michigan Health Information Network (MiHIN): The state of Michigan has placed a priority on its goal to use information technology to drive quality improvements and efficiency in Michigan's health care system. This effort will allow sharing of information between public and private entities to improve patients' healthcare.
- Direct certification for school lunches: By cross-referencing data from the Department of Education to food stamp eligibility data, children that live in eligible households are now being directly certified for free school lunches. This not only improves children's access to this vital service, but it also reduces processing time and costs.

Next Steps

In cooperation with the Michigan Information Technology Executive Council (MITEC), MDIT continues to examine the feasibility of implementing shared information and services throughout the state. Key areas for growth have been identified and include:

- Agencies Sharing Knowledge (ASK): Will create a statewide data-sharing strategy and infrastructure that will provide a single, accurate and consistent source of data for the state's agencies and the services that they supply to its citizens.
- Procurement: Improved automation and identification of the state's aggregate demand for negotiation leverage.
- Standardized and automated HR functions: Create new time and cost savings through a unified approach to managing the State's human resources.
- Human services/case management: Having accurate information contained in one system would enable case workers to spend less time on paper work and more time helping the clients.
- Grant application and accounting: Enable multiple agencies to share grant application information, allow for better budgeting. New e-grants system will provide an electronic portal to exchange information between grantors and grant applicants for all state-managed grants.
- Inventory management: Greater visibility into capitalized and expensed assets, including facilities and maintenance, repair and operations (MRO) items
- Budget development, tracking and sharing: Various operational modules can be tied into a budgeting module for more timely management, with fewer errors caused by redundant data entry.
- Enterprise Architecture: The 2006 MDIT Enterprise Architecture Plan establishes an enterprise-wide approach to information management. The plan defines the steps that will be taken over the next several years. These steps include defining owners for all information entities, creating cross-agency policies for data sharing, developing an open document strategy and providing common data standards for all agencies.
- Document Management Strategy Team: The development of a cross-agency team will provide guidance and continuity for enterprise content management initiatives statewide (including electronic image and document management tools). The team's strategy will address existing practices, future projects, technology considerations, records management requirements, technology standards, business process best practices, overall assumptions and solutions. A special e-discovery task force will work with this team to identify how electronic content management (ECM) tools can assist with discovery of electronically-stored information.

Enterprise Mobility

Utilizing technology to connect state employees to their work anywhere at anytime from anyplace. Projects include infrastructure and application access improvements with the adaptability of being scalable for multiple applications to meet specific business needs.

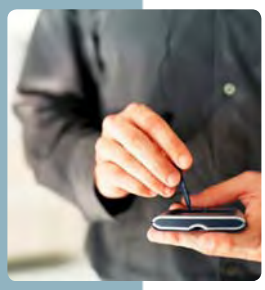
Thomas Friedman, in The World is Flat, points out that intellectual work and intellectual capital can be delivered from anywhere. Forrester Research, Inc. defines enterprise mobility as the ability for an enterprise to communicate with suppliers, partners, employees, assets, products and customers, irrespective of location.

Mobility incorporates devices (laptop, notebook, form factor devices supporting mobile line-of-business applications, cell phone, PDA, USB memory stick, CD, Palm, MP3 player, smartphone, laptop, iPod, camera); connections (Bluetooth wireless, virtual private networks (VPN), wireless LAN, WLAN, mesh, WWAN, high speed Internet access); applications (E-mail, information retrieval, data transfer); security (secure socket layer SSL) and communications (VoIP, Unified Communications). Other expected trends include:

- According to Gartner, by 2011, 65% of enterprise employees globally will have only one phone number that will go direct to a mobile service or, via a converged solution, on to the device of choice, whether fixed or mobile
- Most companies will not replace desk phones with IP during the current upgrade cycle, but this purchase should be the last hard-phone purchase in most corporate environments
- Forrester Research reports that more than 20% of enterprises surveyed in 2007 are currently using or upgrading mobile versions of enterprise applications, with task- and role-centric applications beginning to take hold in the mobile enterprise
- 63% of enterprises in North America will either slightly or significantly increase their usage of laptops
- As more employees go mobile and work outside corporate offices on a regular basis, enterprise IT faces new challenges associated with integrating and managing the growing number of business communications technologies needed to support an increasingly virtual workforce
- As in any other large enterprise, today's round-the-clock business environment is pushing government managers to adopt mobile technologies and corresponding services that enable continuous communications and productivity

Opportunities for Michigan

Around the globe, companies are implementing mobility solutions to increase employee productivity, improve customer responsiveness and ensure data protection for regulatory compliance.



Telework benefits the employer, employee, and community. For the employer, it increases productivity, reduces overhead and occupancy costs, helps recruit and retain good employees, improves attendance and increases efficiency through advanced technology. For the employee, it increases productivity, promotes job satisfaction, reduces commuting time, reduces transportation expenses and improves quality of life by providing more family and personal time and less stress. For the community, it decreases traffic and highway congestion, lessens parking problems, decreases air pollution, reduces energy consumption and increases time for civic involvement.

MDIT and MITEC recognize the importance of mobile worker technologies in the accomplishment of enterprise-wide business goals. Specifically, this technology will enable the State of Michigan to gather field data electronically, provide on-site services directly to businesses and citizens and improve working conditions for employees in rural areas.

The opportunities for mobile worker technology abound in the State of Michigan, enabling the state to be closer to its citizens and reducing costs. Some examples where mobility can be used in state government include:

- Maintenance and repair workers
- Staffing call centers (virtual call center)
- Licensing and regulatory employees
- Field inspectors
- Electronic medical information
- Remote account representatives to verify business information
- Continuation of government services in the event of natural or man-made disasters

Current Status

Current application of mobile technology in Michigan state government is as varied as the different functions government serves. For instance:

- Inspectors from the Bureau of Construction Codes are currently using rugged laptops on site to perform inspections. Inspectors are able to log in at home before coming to work in the morning to upload yesterday's inspections as well as download their current day's permits
- Michigan State Police officers have the capability to access various criminal justice computer systems from wireless laptops in their vehicles
- Unemployment Agency investigators are able to document their investigations while in the field and upload the changes to the main computer systems every night from home

Next Steps

As the explosive growth in mobile technologies continues, a key challenge for Michigan will be to quickly assess the usefulness of these technologies in helping the state better serve citizens. To prepare for that challenge, Michigan is embarking on a number of new strategies:

- Develop an integrated network strategy that offers manageability, security and connectivity across a myriad of networks and devices
- Incorporate mobile technology in overall IT strategies and policies and consider mobile devices as part of the state's telephony strategy
- Improve the delivery of health and human services by lowering overall costs, improving technology and streamlining the way work gets done
- Incorporate the ability to communicate and share information with cities, counties and other states

Greening of IT

Increased environmental awareness and adoption of green principles in enterprise IT facilities, equipment purchases and disposal of equipment.

Forrester Research defines green as IT suppliers and their corporate customers changing the way computing assets are designed, manufactured, operated and disposed of to gain efficiency and cost savings, while reducing environmentally harmful impacts.

Gartner defines green IT as optimal use of information and communication technology (ICT) for managing the environmental sustainability of enterprise operations and the supply chain, as well as that of its products, services and resources, throughout their life cycles.

Worldwide, information technology assets account for approximately 2% of global carbon dioxide emissions; one-third of information and communication technology's (ICT) power consumption and carbon dioxide emission comes from PCs and monitors; 9 to 15% of office power is consumed by office equipment (PCs and monitors) and 60% of PCs are left on after hours.

Opportunities for Michigan

- Environmental sustainability

  Like all governments, Michigan shares an obligation to reduce threats to our air, land and water and fight global climate change. Reducing carbon dioxide emissions, properly disposing of outdated equipment and cutting overall energy consumption are all important ways to fulfill these responsibilities.

- Promote green technologies for citizens and business

  By engaging in green IT, Michigan can lead by example and promote green consciousness among all of our state's residents and businesses. Aside from helping protect our environment, embracing environmentally-sustainable practices can make Michigan a more attractive location for alternative energy companies and other new and emerging job providers.

- Reduce energy costs

  Over the past five years, data centers have reportedly doubled their energy usage (Koomey, February, 2007). In Michigan, controlling energy usage is critical to bringing costs into line with budgets that are already under significant strain.

Current Status

Numerous green IT initiatives are currently underway and have been integrated into projects across MDIT and Michigan state government. These include:

- Data center enhancements

  The data center mainframe and server consolidation is reducing redundancies and increasing efficiencies. In 2002 data centers were scattered across Lansing and the state. Twenty-nine of these are now closed, which has brought servers into a more secure and managed environment, freeing more than 30,000 square feet of space. Ultimately, there will be only three managed data centers, increasing MDIT's ability to control cooling and power consumption.

- M/1 Managed Desktop initiative increases efficiency, lifecycle and inventory control
- Use of "power saver" printers
- New laptop configuration standards promote Energy-Star compliant power sources
- Automated Asset Recovery Program disposes of assets or places them in stock at the Depot for future deployment

- Increased use of videoconferencing, which has reduced employee mileage
- Executive Directive No. 2006-4

  Requires that employees turn off all networked desktop and notebook computing devices at the end of the work day whenever possible and requires logoff.

Next Steps

MDIT, in partnership with other state agencies, is embracing the opportunity to further conserve resources and reduce harmful emissions. Looking forward, future actions include :

- Assess the current environment, carbon dioxide emissions and power consumption before changes are made for later comparisons
- Continue to make current equipment run more efficiently
- Continue data center consolidations efforts
- Consolidate critical applications to same servers that require 24x7 uptime
- Use centralized power management and job schedulers to power off equipment when applications are not active (such as over state holidays)
- Make use of Unified Communications (UC), the converging set of voice, data and video infrastructure services that integrate with common business applications to reduce typical communication bottlenecks
- Increased product life cycles - recycle or have vendors buy back hardware
- Incorporate green criteria into IT systems procurement and select based on environmental attributes

In addition, MDIT is discussing Green IT requirements and criteria that will be included in future technology acquisition RFP's for desktop, server and network components. IT Procurement has also completed the Climate Savers Computing Initiative.

Agency Services

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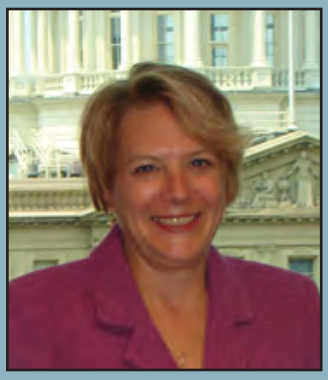
E Agency Services



Lynn Draschil, Deputy Director
MDIT Agency Services
State of Michigan

"Tailoring quality services using sustainable technology to quickly fulfill the needs of our client Agencies"

Agency Services encompasses software development, as well as account management functions for both software and infrastructure, for our client agencies. Executive level accountability and communication with our clients is performed primarily by 6 information officers (IO). Each information officer is assigned one or more agencies, usually organized around similar functions. For each client, or multiple clients if they are small, there is a client services director (CSD). The CSD is the upper and middle management liaison to the client, responsible for both a software development and integration group, as well as coordinating all IT services for their client(s).

Agency Services is made up of 14 of these customer-focused teams providing the same types of services to different clients. Agency Services also includes a few teams that provide some type of shared service to at least 2 or more of these teams. These shared services may include common functions such as geographic information systems, Web development and application administration functions.

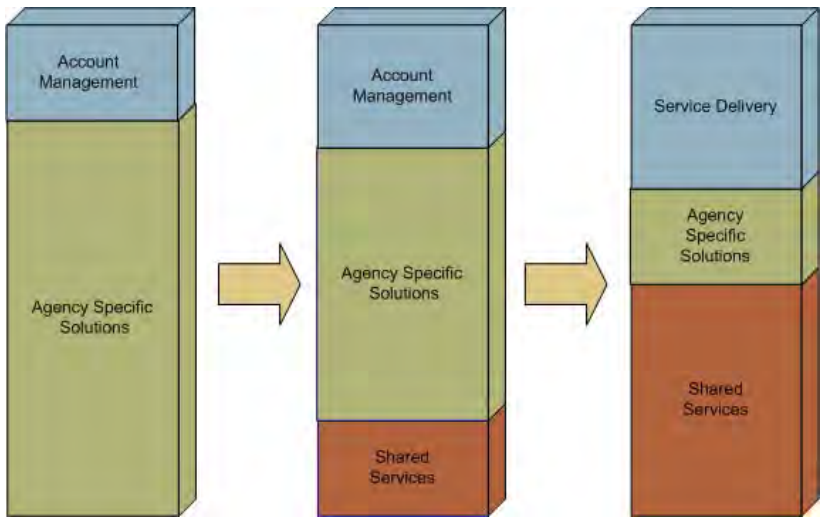
Moving Ahead

The mission of Agencies Services is: "Tailoring quality services using sustainable technology to quickly fulfill the needs of our client agencies."

While we indirectly support all of the strategic plan goals, because of our role as the IT coordinators for our clients, our core purpose speaks to the second goal of the Michigan IT Strategic Plan – to provide better service to our client agencies.

To improve our services, we acknowledge we must break from our past primary focus of working within our own teams, envisioning and creating solutions only for specific customers. While this model served to keep individual clients happy, it was at the expense of standards and long-term sustainability of solutions. It also promoted a narrow view of how to support state of Michigan IT, dividing and separating the development and support resources for software.

Agency Services Road Map



The road forward will mean additional engagement with our customers, providing more information to manage their current IT investments, as well as make better decisions about their future ones. The need to reduce resources spent on existing systems, and maximize the value of future investments, guides us toward future shared services and fewer agency-specific services. We envision our clients focusing more on the processes and services performed and less on the resources performing them. Employees will also be focused more on the quality of the services delivered, regardless of the client.

Moving forward, the drivers for Agency Services mirror the need of our clients for better service – reducing the resources spent to maintain existing systems, improving the overall quality of our services and processes and working to maximize the value of new investments.

Service Delivery

Initiatives and Objectives Shaping the Future

In the past our interaction with our clients consisted of standard account management practices. We will improve our service delivery by building portfolio management processes, establishing service level metrics for existing services and using project management offices to more consistently control and monitor new development.

Building Portfolio Management Processes

Portfolio management is a set of processes that allow an organization to see the work in progress, as well as the work requested, and organize resources to complete the highest priority work. This will require tools to track the complete inventory of existing systems and projects, our current resources, and monitor where the resources are deployed. These capabilities, along with an annual call for projects, ongoing demand management and better budget planning and coordination will help our clients maximize the value of their future IT investments.

One of the primary processes to be established is a standardized annual call for projects. Before the beginning of a fiscal year it will target the agencies' highest-priority projects to be funded for the upcoming fiscal year. Even though plans may change and new needs arise during the fiscal year, the annual call for projects will be the baseline for IT investment for the year. By standardizing the process we can identify agencies making similar investments and combine the investments into a shared service that will lower costs of development and support.

Demand management is the process we will use to manage ongoing work requests outside of the annual call for projects. Agencies have a continuing need to make changes to systems as a result of legislation, new federal requirements, changing business processes and better ways of doing business. Agency Services teams receive requests throughout the year asking for changes to existing systems or to start a new project that was not pre-planned in the annual call for projects baseline.

To ensure that the agencies are aware of their project-wide resource commitments, Agency Services will use tools for resource planning and allocation that are tightly integrated with project planning and tracking to provide clients with the appropriate impact assessment for all the work that is in progress or previously planned.

Demand management will help us work with clients to help prioritize, scope and resource requests to enable the best decision whether to complete or defer the request. This process will help our clients better manage their IT investments, by ensuring that the most valuable work is done. This will also help prioritize work for Agency services staff.

Better Budget Planning

Currently budget impacts of new projects are considered for their development and implementation costs but not for the effect of costs for on-going support and maintenance. Accounting for future operational costs for new systems will be made a standard part of the project-funding process.

IT funding is appropriated on an agency-by-agency basis. MDIT will work to consolidate budget requests across the state based on common business needs. This will be especially useful in areas where shared services will benefit multiple agencies at a lower total cost. An example is shared disaster recovery servers.

Service Level Agreements and Metrics for All Services

MDIT is committed to providing outstanding customer service. Metrics allow trans-

Foundational Framework

The MDIT Foundational Framework is a collection of drivers and best practices that define our approach and govern our projects as we deliver on our vision. This framework binds our initiatives and aligns them with the statewide technical direction and MDIT's project portfolio.

Foundational Framework

- **Shared Services:** Leveraging services enterprise wide for ease of access, savings and efficiencies
- **Enterprise Architecture and Security:** Provides the tools, processes and standards to translate business needs into IT solutions securely, efficiently and effectively
- **State Unified IT Environment (SUITE):** Standardized management methodologies, procedures and tools for systems development
- **Service Delivery:** Coordinated application, infrastructure and service delivery enterprise wide
- **Organizational Drivers:** The guiding policies and principles in the 2008-2012 Michigan IT Strategic Plan

Michigan Business Portal

"We continue to use technology to make it easier than ever before to start up or run a business in Michigan 24 hours a day, seven days a week. The new online service is a single point of entry on the Internet to register for unemployment insurance and taxes, together with the award-winning MiTAPS portal which centralizes state licenses and permits, we're making Michigan even more business friendly."

-Jennifer M. Granholm, Governor, State of Michigan

Innovative Fraud Detection

"As subsidized daycare programs expanded nationwide, we looked for new ways to strengthen program integrity in Michigan. Where fraud is suspected, sharing data across agencies allows us to target it efficiently. The success of this and other fraud detection efforts is a direct result of the development of a well-designed human services data warehouse. This project demonstrates the true value of data sharing within state government, saving millions of dollars for Michigan taxpayers and preserving child care funding for those who truly need it."

From the Director of the Michigan Department of Human Services

parency of operations to customers and facilitate accountability, integrity and improved processes. Metrics may include a specified response time for help desk tickets or estimated vs. actual completion. Employees will provide effort estimates as well as detailed tracking of work for billing purposes. Clients will receive more accurate expectations and better understanding of services MDIT provides.

Project Management Offices

MDIT will expand and enhance project management offices (PMO) to provide project management knowledge and processes, with strict adherence to the State's SUITE methodology, to ensure effective management of projects within the triple constraints of time, budget, and scope. Offices will be staffed with project management experts to support data-driven project monitoring and status. Other PMO responsibilities will include staff support for organizing application releases, and monitoring and managing system configurations for existing applications.

For our resource managers and technical experts, this means a reduction of the work currently done to provide project management oversight. For other staff, this will offer the opportunity to specialize in project management with the introduction of a new project manager classification. Agencies will benefit with consistent, reliable control and monitoring of projects.

Agency-specific Applications

Initiatives and objectives Shaping the Future

Development of agency-specific applications was the rule of thumb to maintain services with the restructuring of IT that created MDIT. As our organization has matured, we have identified new approaches to building, enhancing and maintaining services. The approaches include enterprise architecture driven projects, a new system development lifecycle, modernizing aging systems and increasing our efficiency in maintaining existing systems.

Enterprise Architecture Driven Projects

A deliberate and planned enterprise architecture (EA) for our systems will maximize future IT investments through faster design and implementation and a simplified support environment. An EA strategy also reduces system outages and promotes faster recovery from problems. Agency Services will be a full participant and supporter in MDITs Enterprise Architecture activities. Enterprise Architecture starts with the most fundamental: Technical Architecture.

Technical architecture is defining the standards for technical products and their lifecycle of use in the state of Michigan. We currently may be using 5 or 6 different tools to accomplish the same function. This means we must maintain expertise and training, implement patches and updates, as well as renew contracts and support agreements for all these tools. While one size or tool may not fit all, simplifying the technical architecture of the state of Michigan to fewer products will make a world of difference. The practice of technical architecture helps make decisions about the tools we will continue to support or migrate toward, and those tools we will migrate from. These decisions are communicated through our technology lifecycle roadmaps.

Solution architecture is the next step up the ladder from technical architecture. It is a set of processes that set standards, using a combination of products to make a deployable solution for an application. For instance, if it is determined that an Intranet application is needed there will be a ready template, or solution pattern, that identifies high-level architecture for the Web server, application server and database server, and how and where to deploy them securely.

There will also be one, or many, reference models that will specify the best combinations of specific products from the technology lifecycle roadmaps that will work well together and will be the easiest to support. These are the processes of solution archi-

tecture that can speed development and implementation of new systems.

The processes facilitating EA-driven projects will let employees know in advance the skills necessary in the future so they can target their training plans and careers to the appropriate path. Also, an architect position will be created within each of the Agency Services teams to work with their peers and colleagues in implementing these practices.

Agency contacts may eventually learn a new vocabulary of products as we migrate toward more current and common technology. Agencies will also benefit from improved development, implementation and support capabilities for their new systems.

Standard System Development Lifecycle (SDLC) Processes

SDLC is the policies and procedures that govern how we develop software. This is being implemented in MDIT through the SUITE – System Engineering Model (SEM). Using standardized processes reduces defects throughout the lifecycle of gathering requirements, designing, building, testing and deploying applications. The use of these processes will improve quality and customer satisfaction with the applications we build. All team members involved in the system development process will receive training and be offered support on using these consistent processes. The system development skills are transferable anywhere within MDIT or the private sector.

A summary training will be offered to our clients so they can understand our processes and the exercises we are asking them to participate in. Our clients can expect software will be developed with fewer defects and will work as expected.

Modernization of Existing Systems

The state's oldest systems are the most expensive to maintain. Older platforms with limited vendor support mean it is difficult to get updates to address new security threats. The skills needed to keep older systems running are not available from new hires or through technical training companies, and are even difficult to find in outside consultants. Our existing skills pools are waning as the demographics of our workforce shift to more than a third of our workforce will be eligible for retirement. These risks require us to modernize these systems.

Work will continue on modernization of the system for eligibility for federal and state assistance (Bridges), the Medicaid Management system replacement (Champs), a new vehicle and driver registration system to support new processes with the Secretary of State (BAM) and a new tax system (MIITAS) in which the first phase is to support the new Michigan Business Tax.

There are other major systems needing modernization, including systems for: Unemployment Insurance, Corrections, Transportation, the state's accounting system (MAIN) and liquor ordering, just to name a few.

We will be working with agencies to identify systems and secure funding for modernization efforts in future fiscal years. MDIT staff can expect opportunities to learn new tools and upgrade their skills to be made available to support new systems.

More Efficient Operations to Reduce Support Staff Hours

More of our energy and resources are spent on running existing systems than developing new ones. Our resources are finite and we are pursuing initiatives to improve our efficiency in maintaining current systems in order that staff may be redeployed to

Human Resources Optimization

"The goals of increasing efficiency and saving money, while at the same time maintaining high customer service ratings, required us to fundamentally change the way we deliver HR services in the state. In collaboration with our partners in the HR and IT communities, we took this opportunity to streamline business processes and to leverage and apply technology in a strategic manner to meet our goals. With the dedicated efforts of many, we delivered the project ahead of schedule and under budget and are receiving consistently high levels of satisfaction from our MI HR customers."

State of Michigan Personnel Director and Project Manager

improve productivity elsewhere and support new investments.

Better use of automated tools for batch processing, defect tracking, testing and system configuration management will streamline our current efforts. Resource planning and tracking tools, as well as an improved separation of duties, will boost productivity as staff can be more focused and fully concentrated on fewer responsibilities.

Shared Services

Initiatives and Objectives Shaping the Future

Shared services is not new to MDIT or Agency Services. The Center for Geographic Information is a service center and a competency center for geo-coded data and geographic systems. HRMN and DCDS are examples of shared applications. Combining and standardizing support using shared services will lead to improved support and better return on investment for the state of Michigan. There are 3 models that will be used to expand the services available to our clients.

1. Highly technical solutions used across multiple agencies can be supported more efficiently through a shared service center staffed by skilled resources. These service centers will be formed around universal and tangible technologies that will provide ongoing support to any agency who requests it. Instead of duplicating support for common technologies across narrowly-focused customer teams, resources can be combined to offer a more consistent and wider range of support to customers. Examples of coming service centers include: business object reporting, address quality assurance for both postal and geo-coded locations.
2. Specialized skills and knowledge can be deployed on a project basis across the organization through a competency center. Competency centers will bring together staff with specialized knowledge and make them available to consult on a project-by-project basis. The competency center will give expertise and guidance to the teams doing the service delivery. An example of a future competency center is data sharing and classification. The group will act as a resource for data classification standards and processes that Agency Services teams can turn to when implementing data sharing agreements.

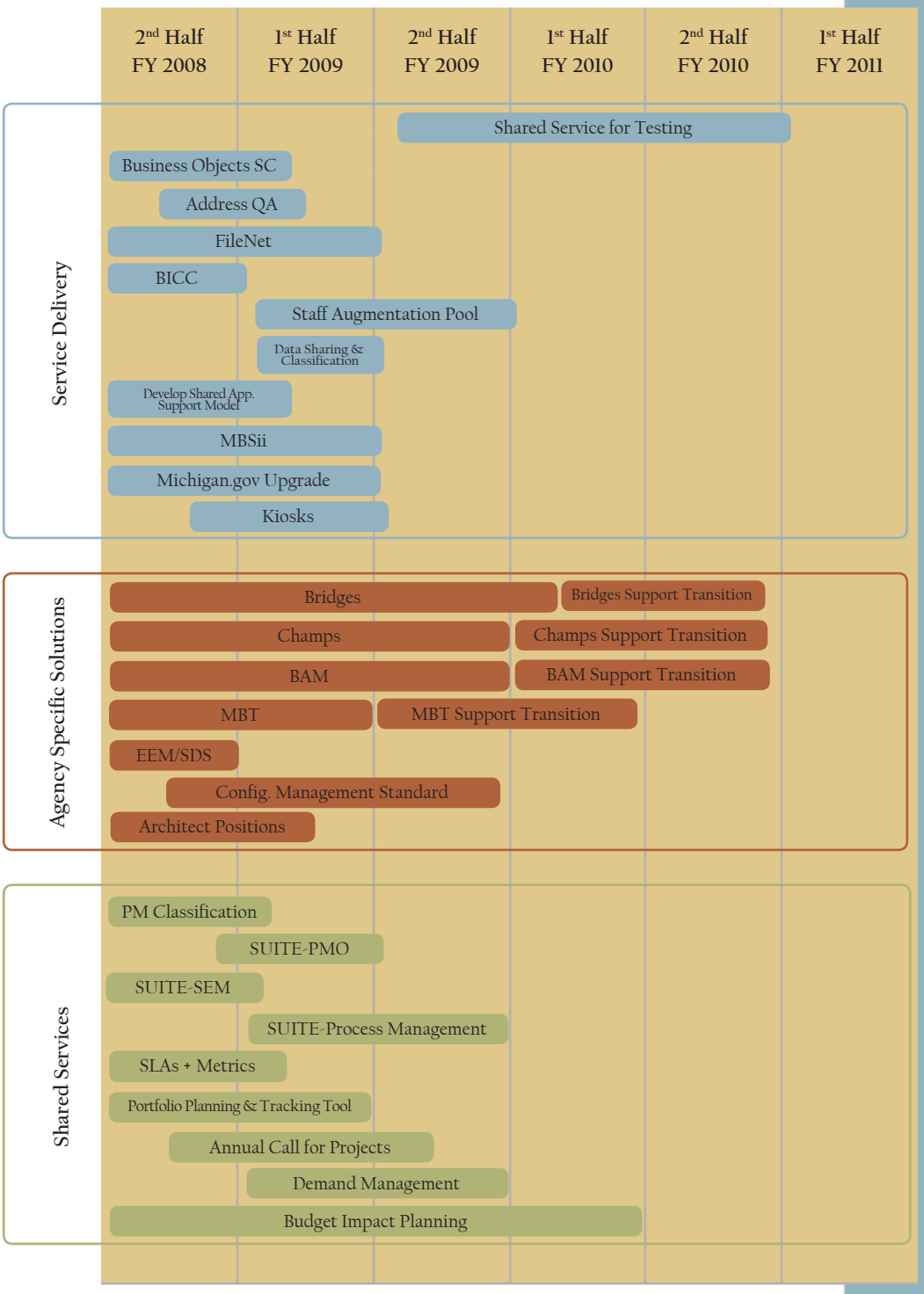
   These shared services models allow staff the opportunity to excel at specific technology and jump from project-to-project. This will also provide staff with additional training opportunities and the ability to work with multiple customers. Our clients will benefit from reduced support costs and common access to the same skills and technologies, and a knowledge base that is helping set standards for other agencies.
3. To maximize the value of new investments, a third model is a shared application. Shared applications make sense when there is a common business process that may be used by multiple agencies. Examples of current shared applications are DCDS for time reporting, HRMN for HR management and Mi-360 for feedback of employee performance. Current and future opportunities for expansion or creation of shared applications are MBSii, grant administration applications and an application to perform licensing processes.

For employees this means that development teams with in-depth knowledge of common processes can make a great impact by offering their application to multiple agencies. For our clients with common processes, these applications will often offer 90% or more of the needed functionality without any customization. By sharing applications, agencies can access new, automated systems even if in the midst of severe funding constraints.

Improve Skills Availability

There are many highly technical skills needed at various times by MDIT clients, yet

not currently within our customer-oriented teams. MDIT will build these skills with staff augmentation pool within MDIT to allow flexibility and access for temporary assignments to projects. Staff in the pool will be exposed to a wide variety of projects and agencies will have quick and easy access to high-demand skills not present in



their existing service delivery teams. This will be a small, deployable pool intended for either priority needs that have short timeframes or as temporary project support.

Targets for Initiatives and Outcomes

Provided below is an overview of the targets for Agency Services initiatives and outcomes from the second half of FY 2008 through the first half of FY 2011.

Outcomes

- Launch accountability portal for government spending (2008)
- Pilot next-generation kiosks with thumb or finger print authentication (2008)
- Fully implement Web 2.0 technologies within Michigan.gov (2009)
- Secure interactions with mobile phones and Michigan.gov (2009)
- All new development is following standard solution patterns and reference models (2010)
- CMMI Level 3 certification (by 2012)
- Expand the use of search technology making more government information accessible directly from major search engines (Ongoing)
- Create new shared services each year (Ongoing)
- Improve the information available for agency investment decisions (Ongoing)

Cross-walk between the Goals, Strategies and Plan

Provided below is a cross-walk between Goal 2 of the Michigan IT Strategic Plan Strategies and the activities set forth in this Agency Services plan. It demonstrates how the high-level priorities of the department will be addressed and carried out by teams within Agency Services over the next five years.

Goal Strategies	Efficiencies	Improve Quality & Accountability	Maximize Value
Portfolio Management			✓
SLAs		✓	
Project Management Offices		✓	✓
Architecture		✓	✓
System Development Lifecycle		✓	✓
System Modernization	✓		
Improve Maintenance Operations	✓		
Shared Services	✓		✓

Looking Ahead

Looking forward, Agency Services will continue its commitment to providing quality, timely and efficient service to all of our agency partners. However, as Michigan's enterprise IT model continues to evolve, promoting and facilitating greater collaboration between client agencies will become a particularly critical role for Agency Services.

With this new role comes recognition that the diverse pool of talent and knowledge within each of our client agencies is one of our greatest resources as we find and develop innovative new solutions.

Ultimately, through increased service sharing and collaboration, Agency Services will empower our agency partners with new tools, enabling them to spend less time wrestling with technology and more time on fulfilling their mission and commitment to Michigan's citizens.

IT Standards & Contract Management

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IT Standards & Contract Management

Carol Steffanni
Director, MDIT Bureau of Strategic Policy

It is our vision that MDIT Standards and Contract Management will lead the way in providing access to state employee services that are fast, efficient, effective and not dependent on an outdated model of requiring employees to be sitting in their office to request IT procurement assistance. Replacing antiquated paper processes with Web-based applications, online collaborations and mobile worker access will foster strategic partnerships and show state agencies what is possible in the way of streamlining operations. In addition, as the state plans for responding to possible natural or man-made disasters, providing state workers access to procurement applications outside of the traditional office environment will help mitigate the disruption of state services such disasters could cause.

Vision of Action

Strategic partnership is the core of our IT Standards and Contract Management action plan for 2008-2012. Through trusted relationships, including a cooperative and vital relationship with the Department of Management and Budget (DMB), our vision is to effectively bridge the IT needs of the state of Michigan and its agencies with the best offerings from the vendor community.

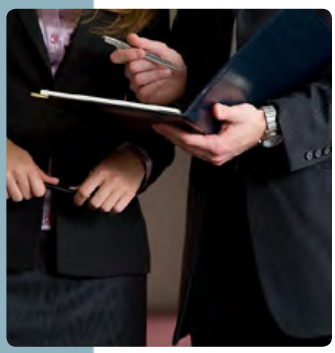
Procuring IT commodities and services is an integral piece of the overall MDIT mission. With over $200 million spent on IT procurement in FY 2007, the challenge is to ensure the right purchase is made at the right price with the right results. This is best accomplished through contract vehicles that protect the State's investment while encouraging vendor partners to provide the very best they have to offer at preferred rates and terms.

Contract vehicles must comply with state regulatory requirements while still allowing for expedient processing. Our DMB partners manage bidding and award processes to meet state legislative mandates and ensure competition. The IT Standards and Contract Management Office will work within DMB guidelines to establish contracts that are flexible enough to accommodate the diverse requirements of Michigan's agencies, balancing the need for tight business requirements with the ease of using standard templates and checklists. This effort will be extended to local units of government where we can work strategically to share bidding efforts, as well as aggregating contract values and achieving economies of scale.

Protecting Michigan's environment through judicious procurement methods and energy-efficient computer devices is a priority. We will develop a green IT procurement strategy which includes commodity contracts that place a premium on eco-friendly packing materials, energy conservation, lead - and emission - free components, and recycling. Through our green IT strategy, MDIT will help assure that Michigan's unique natural environment will be sustained for future generations.

Building strategic partnerships and assuring best value purchases require an IT procurement workforce that is professionally trained and motivated to make the best use of taxpayer dollars. Investing in professional certifications and customer-focused training programs will give staff the tools they need to work successfully with customers and suppliers. IT Standards and Contract Management will be the leading edge in terms of government procurement offices.

Our action plan for the next three years is ambitious, but with a focus on the core values of excellence, inclusion, integrity, innovation and teamwork, we will lead the way in strategic IT portfolio management. Expanding our partnership to include Michigan's local government IT needs will not only provide better value from economies of scale, but also further the goals of a connected Michigan, allowing the use of common tools to enable citizen access to government services any time and from any place. We invite you to read the following pages to get a better understanding of how we will be putting our plan into action.



Background

Services Portfolio Management

The 2006 Auditor General audit of statewide information technology contracting practices of DMB and MDIT reinforced MDIT's IT contracting efforts to strengthen management of the state's IT contract portfolio. Work statements and business requirement templates were created to standardize methodologies, procedures, training and project management in a system known as the State Unified Information Technology Environment (SUITE) model. The work statements and business requirements were then scrutinized and tightened before requests for proposal were allowed to be published for bid. Tools to promote better vendor management techniques and documentation of contract management practices were developed. A standardized template for assessing contract risk and associated risk management strategies was designed. As we move beyond the design and publication of templates and processes, project and contract manager education and process quality control efforts will be key elements in our success. We will continue to ask for input from our internal and external partners to improve our management processes.

Commodity Procurement

IT commodity procurement is focused on building a trust relationship with customers, accommodating agency business needs while enforcing enterprise standards as they emerge. To maintain that level of trust, feedback is continually solicited from customers and when necessary, action is taken to remedy concerns. Key customer feedback indicated that IT procurement takes too long and, without a consistent tracking tool, a black hole perception prevails. In 2007, the Standards and Contract Management Office took action. First, a focus group was formed to identify specific "pain points" experienced by both internal MDIT and agency staff related to IT procurement. Next, an in-depth study examined over 1300 purchases to determine what desktop commodities were being requested, how long each step of the process took and how each step was tracked. The results of the focus group and records study gave us a baseline from which to design improvements. As 2008 begins, we are beginning the rollout of a Web-based request and tracking system that will speed up the IT procurement process and allow customers to track the status of their requests from initiation to installation.

The Organization

Changing the methods used to improve IT procurement led to a change in the organizational structure. Rather than two staff sections separated by commodity and services procurement, the staff was organized into teams providing total procurement and portfolio management services to assigned groups of agencies. With complete integration scheduled for 2008, the team concept promotes a big picture approach to satisfying the needs of each agency and assures that agency needs can be met using the resources of the team. MDIT portfolio management teams will help assure compliance with the SUITE model and emerging enterprise architecture standards. Additionally, a small support team focused on design, development and implementation of new tools and staff training will improve the consistency of services provided. Support team efforts in 2008 will expand to outreach and training of other MDIT and agency staff on the new tools and processes.

Goals and Objectives

Mapping IT procurement goals to the six goals in the state's IT Strategic Plan clarified our direction for the coming years. By focusing on our vision of partnership and excellence, we will accomplish our objective to make the right purchases at the right time with the right results.

Goal 1: Provide excellent IT portfolio management services

- Formalize IT investment planning and management activities
- Adopt best practices for government IT portfolio management
- Formalize project and portfolio management processes
- Develop and implement quality assurance processes for consistency of portfolio management and alignment with the SUITE model
- Refine contracting processes to provide seamless, transparent services
- Train MDIT and state agency contract administrators on effective IT project management techniques

Goal 2: Develop innovative IT process improvements

- Implement paperless, Web-access purchasing for IT commodities, maintenance and services, furthering the goal of empowering a mobile workforce
- Delegate standard IT commodity purchases to state agencies through Web-based ordering with post - audit reviews
- Work with DMB's Purchasing Operations Office to objectively assess the correct procurement method for small, large and proprietary purchases
- Review current MVP, Re-Start and MIProject contract vehicles with the goal of implementing contract vehicles that are efficient, effective and align with IT strategic goals
- Implement streamlined leasing options to obtain desktop equipment
- Reduce overall processing times for IT commodity procurement by 30 percent
- Continue and expand the use of focus groups to improve customer satisfaction, our processes and our strategic direction

Goal 3: Continually improve our stewardship of public funds designated for IT portfolio management

- Implement technology lifecycle roadmaps and invest appropriately
- Use strategic sourcing methodologies and tools for technology purchases
- Implement risk assessment strategies that align contract award and management activities to the risk associated with each project
- Statement of Work and business requirement templates tied to level of risk
- Selection processes and contract language tied to level of risk
- Analyze maintenance purchases, seeking low cost, bundled solutions wherever possible
- Structure IT commodity contracts to take advantage of supplier sales, special volume discounts and vendor-managed reporting
- Monitor vendor performance and take actions as appropriate to assure value is received for dollar spent
- Access federal or local government contracts when better pricing opportunities exist
- Create contract vehicles that further our goal of moving from time and materials to fixed-price engagements

Goal 4: Michigan-a green IT state

- Require successful bid of IT commodity contracts to include eco-friendly bulk packaging, recycling/reclamation of aged components and energy-efficient IT desktop equipment
- In partnership with IT vendors and MDIT's infrastructure management, design and implement a green IT server procurement program
- Replace paper-reliant processes and files with paperless, online processes and procedures

Goal 5: Build strategic partnerships

- Regularly hold programs to educate vendors on state strategic IT direction
- Provide a forum for vendors to showcase new and emerging technology
- Share lessons learned from Michigan's experience in consolidating IT procurement
- Actively encourage participation by all groups of vendors in IT bids
- Collaborate and plan with local governments and non-profits for shared purchasing power
- Collaborate with our customers to forecast, plan and implement timely solutions
- Seek partnerships with private vendors, educational units and other Michigan governmental units to share IT facilities and services

Goal 6: A professionally trained, motivated IT Standards and Portfolio Management workforce

- Provide staff training to become professionally-certified contract administrators
- Empower staff to own and manage their portfolios
- Promote staff ownership of the procurement process to ensure complete customer satisfaction utilizing proactive measures to resolve issues
- Encourage partnerships with other areas of the department that provide links to the services provided in procurement; i.e., depot and field services
- Recognize outstanding results
- Work toward Capability Maturity Model Integration (CMMI) contract administrator certification for staff

Projects

ITRAC (Information Technology Resource Acquisition for Commodities) is a project currently being implemented statewide, with full implementation slated for Spring, 2008. ITRAC replaces three existing paper forms and numerous spreadsheets with a standardized, web-based request, approval and tracking mechanism for ordering IT commodities. In conjunction with implementation of ITRAC, MDIT procurement has revamped its internal processes to greatly reduce dependence on copying, scanning, paper files and cut and paste signature processes. The user experience with ITRAC encourages the ordering of standard commodities and bundles. Implementation at the agency level includes web-based training to reduce the need for travel dollars and time. Expansion of the ITRAC model to maintenance and services will further the goal of a connected, mobile work force. Expansion to include all forms of IT procurement requests, with associated agency and MDIT electronic workflows, will be in place in 2009.

Information Technology Resource Acquisition for Commodities (ITRAC) System

A web application for requesting and tracking IT commodity requests was recently rolled out. The ITRAC application includes features such as drop-down menus for commonly purchased products and their current prices, options to receive e-mail status alerts from initiation to installation, and optional paperless processing.

ITRAC consolidates information requirements and requesters will be able to use searchable fields to find and review requests. Electronic attachments and agency notes fields are also functions of the application. Requests can be printed or e-mailed at the touch of a button.

C-TRAK (Contract Tracking System) is a project that is currently in the initiation phase at the Michigan Department of Transportation (MDOT). C-TRAK is a web-based contract administration module incorporating workflow and document management throughout the complete lifecycle of service contracts. C-TRAK will replace various standalone and disparate contract tracking tools and consolidate all IT service contracts into one database. MDIT will leverage this tracking tool after rollout at MDOT. C-TRAK will make information regarding service contracts available to all state employees throughout Michigan. Business partners, such as vendors, federal and local government agencies, legislative groups, and the like, will have limited access. This first module will be later integrated into a full e-procurement solution.

Contract Improvements - MDIT is implementing recently developed tools to assess and manage risk associated with large or complex projects. Risk assessment tools will be used in combination with business requirement templates to structure contract work statements that result in contracts that better protect the state's interests.

Metrics and Measures

Measuring the success of a support organization is largely dependent on the customer feedback related to specific projects. However, it is important that wherever possible, baselines for service delivery be established, and progress measured against the baseline at regular intervals.

Goal 1: Provide excellent IT portfolio management services

- Formalized IT investment planning and management activities by 2009
- Formalized project and portfolio management processes by 2008
- 100% continuity of service (no expired contracts, late PO's, insufficient dollars to pay for services or expired maintenance) by 2010
- Establish and publish service level metrics for procurement by June 2008
- Increase enterprise contracting by 10%:
  - 2008 – 3% increase
  - 2009 – 4% increase
  - 2010 – 3% increase

Goal 2: Develop innovative IT process improvements

- 100% of purchase requests are submitted via Web-based applications by 2009
- A minimum of two desktop leases are executed each year for state agencies by 2009
- 80% of commodity purchases are made within two days of authorized approvals by 2009

Goal 3: Good stewards of public funds designated for IT procurement

- Implement technology lifecycle roadmaps and invest appropriately (Ongoing)
- Strategic sourcing methodologies and tools used for technology purchases by 2009
- Seek best prices through volume purchasing (Ongoing)
- Most-favored-nation language is included in all contracts (Ongoing)
- Contract rate structures are reviewed at least once during a multi-year contract period beginning in 2009
- All contracts over $1 million will have formalized business case documentation by 2009

Goal 4: Michigan-a green IT state

- At least two paper procurement processes will be converted to electronic applications by 2010
- All commodity contracts will have eco-friendly packing requirements by 2011

Goal 5: Build strategic partnerships

- Conduct or participate in at least two vendor forums designed to increase participation by all Michigan vendor groups – one in 2009; another in 2010
- 20% increase in local government utilization of state IT contracts
  - 2008 – 6% increase
  - 2009 – 6% increase
  - 2010 – 8% increase
- 40% increase in the number of vendors bidding on state IT contracts by 2012.

Goal 6: A professionally trained, motivated IT procurement workforce

- All contract staff certified in professional IT procurement by 2009
- Post work output statistics monthly, with high performers recognized at quarterly staff meetings, beginning in 2009
- Results of customer feedback surveys show a 90% "good" or higher service satisfaction level by 2009

Infrastructure Services

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Infrastructure Services

Patrick Hale, Deputy Director
MDIT Infrastructure Services
State of Michigan

"This plan is our roadmap for crossing the "consolidation finish line" and our compass to push shared services farther than has ever been done...."

Vision of Action

The 2008-2012 Infrastructure Services (IS) Strategic Plan is our roadmap for crossing the "consolidation finish line" and our compass to push shared services farther than has ever been done in the public sector.

Typically considered a background activity, infrastructure rarely takes center stage in an organization's focus. To be sure, there are precious few examples of well-aligned infrastructure plans in the private or public sector from which to draw.

Our Vision

United in Service
Dedicated to Excellence
Empowered to Deliver

Frequently compared to the foundation of a building, the plumbing in a house, even the air that we breathe - whatever your chosen analogy, one thing is certain, not much happens in business or technology without the foundation of IT infrastructure. In Michigan, the communications network, help desk, PC's, mainframes, data centers and, most importantly, the 800 individuals running them are at the heart of our capability to deliver value.

For our state, formal plans for infrastructure can no longer be an elective activity. Citizens and employees demand more from IT than ever before. We continue to face a statewide economic crisis that requires tough decisions every year, and our staff is hungry to know where their efforts fit into the bigger picture. With this backdrop in mind, we carved an infrastructure plan rooted in business need that is detailed enough to set direction for the troops on the ground.

This plan includes specific initiatives over the next five years, but there is more to it than that. We are reaching deep into our organization to find out how things are going and to set clear goals for improvement in the areas of communication, sharing of ideas and solutions, setting priorities, decision making and workplace satisfaction.

The process of developing this plan was a good experience. We have started something that will help us improve on many levels and keep us on track with Michigan's IT goals. Together we have focused around the following vision: "United in Service, Dedicated to Excellence, Empowered to Deliver."

From the top down, we will continue to do the self-evaluation that is necessary, to listen to our staff and to fight the good fight as we face inevitable barriers along the way. Operational excellence is the goal, and this 2008 Infrastructure Services Plan is a critical step in our journey as we push forward.

Foundational Framework

The MDIT foundational framework is a collection of drivers and best practices that define our approach and govern our projects as we deliver on our vision. This framework binds our initiatives and aligns them with the statewide technical direction and MDIT's project portfolio.

Foundational Framework

- **Shared Services:** Leveraging services enterprise wide for ease of access, savings & efficiencies
- **Enterprise Architecture and Security:** Provides the tools, processes and standards to translate business needs into IT solutions securely, efficiently and effectively
- **State Unified IT Environment (SUITE):** Standardized management methodologies, procedures and tools for systems development
- **Service Delivery:** Coordinated application, infrastructure and service delivery enterprise wide
- **Organizational Drivers:** The guiding policies and principles in the 2008-2012 Michigan IT Strategic Plan

2008 Infrastructure Services Leadership Conference

The Infrastructure Services Organization

Michigan has a rich history in technology infrastructure. We were the first state to appoint a CIO and the first to complete telecommunications and mainframe consolidations. We found ways to make progress with the tightest budget conditions in our state's history and recently have delivered on our promise to consolidate 29 data centers in the Lansing area.

Michigan's IT infrastructure is managed by five teams: Telecommunications, Data Center Operations, Office Automation Services, Field Services and Technical Services. These teams are the "face" of IT services in Michigan. They respond to an average of 29,000 calls each and every month from the state's 55,000 employees. IS managers are responsible for an annual budget of over $160 million and provide connectivity to over 1200 locations throughout the state. Every state function, from prison operations to park reservations, is supported and enabled by these five groups.

Planning for the Future

Infrastructure planning cannot be successful if done silo by silo. A data center plan is limited in its effect if the telecommunications network is not there to support it. Likewise, dramatic advancements in PC technology and capability are lost if the teams supporting our end users are not equipped with the necessary skills or tools.

Recognizing this, Infrastructure Services brought leaders from across the organization together and developed a common vision. Looking at customer needs as defined in our strategic plan, studying industry best practices and taking input from our staff, a plan was developed to build the infrastructure today that will meet the needs of tomorrow.

Michigan's employees, businesses and citizens are becoming more mobile, require immediate access to services and demand higher levels of service than ever before. Meeting those needs head on, IS developed our mission. It contains long-range plans and tactical initiatives ranging from virtualization and green IT to statewide office automation, disaster recovery and remote worker capabilities.

We invite you to read through this document and experience firsthand Michigan's inaugural infrastructure strategic plan.

Our Mission

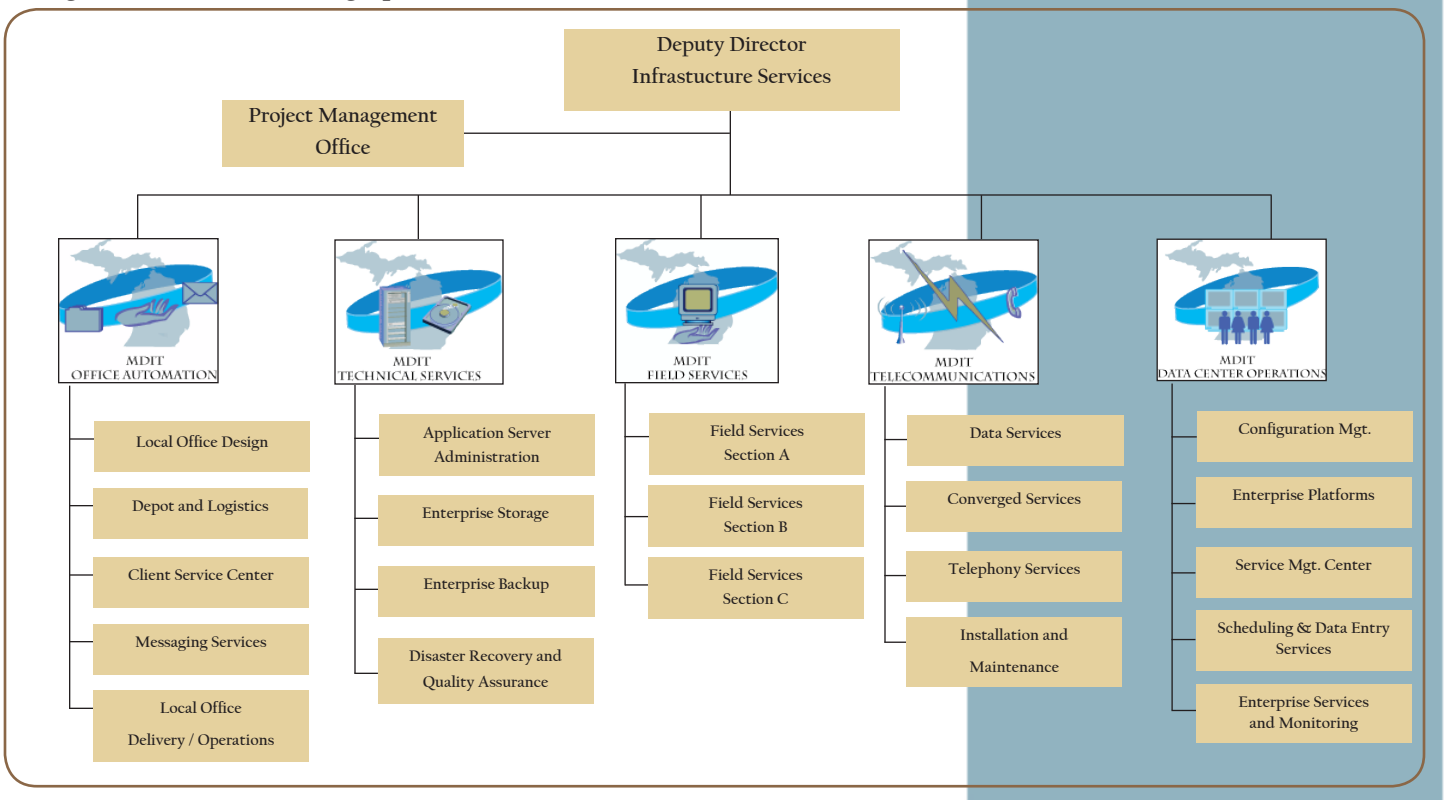
We are entrusted with our citizens' services 24 hours a day, 365 days a year.

We are expected to forecast the changing landscape of technology and deliver value with every project.

We are called to partnerships that make government more effective and energize our staff.

We lay the foundation of Michigan's future through technology.

We are MDIT Infrastructure Services.



G Infrastructure Services

Adding Value

"The Service Delivery Infrastructure Services specialist and the Technical Services manager are the resources our application development teams rely on the most for the continued hardware support of systems and they have done an excellent job supporting our clients."
-Juan S Chapa - Client Service Director supporting DLEG

"These guys know everything!"
- Feedback on Server Team 6

"...my thanks to the Backup and Recovery team for always going out of their way to assist me."
- Feedback on OA Delivery Services

"I would like to thank all involved in solving my Internet access problem.... You all do a great job every day."
- Department of Corrections Feedback on Saginaw Probation Remedy

Technical Services

The Technical Services (TS) Division of MDIT is the state's application system administrators. They support and maintain the infrastructure for more than 2,200 of Michigan's most critical servers. This team is tasked with keeping legacy systems running, while at the same time, providing innovative ways to deliver shared technology services across the state's 19 agencies. The state's massive 1.8 petabytes (one point eight quadrillion bytes) of storage, and backups and recovery of all centralized data, fall within its realm of responsibilities.

The mission of the division is to provide best-of-breed technologies for the supported operating environment so mission critical applications data requirements are met in a timely and cost-effective fashion.

Scope of Services

From the first piece of hardware needed to the last delivery of release code, Technical Service's 110 employees are a critical component of every software development launch. In partnership with Agency Services application development, this team delivers on milestones throughout all of MDIT's major projects (Bridges, BAM, CHAMPS).

From shared services, like the thin client center of excellence, to standardizing the state's call center environment, Technical Services is tasked with making Michigan's technology work securely and efficiently, every hour of every day. Technical Services is organized into the following groups:

- Application Support
- Enterprise Validation
- Enterprise Storage
- Enterprise Backup & Disaster Recovery

Top Initiatives	Milestones	
Continuous improvement of Technical Services operational efficiencies *Patch management, administrative account clean-up, end-to-end restore testing, backup and recovery governance model, capacity cleanup and optimization*	March 2009	Patch Management OS Base (Audit Requirements)
	December 2008	Administrative Account Cleanup
	June 2008	Backup Governance Model
	September 2008	Backup Hardware Upgrade
	June 2009	Backup Policy Cleanup
	September 2009	End-to-End Restore Testing
Emerging/specialized area technology support *Providing the back-end staffing and support processes for specialized technologies like thin-client servers and call centers.*	December 2008	Establish Matrix Teams Concept
	March 2009	Establish Policies & Procedures Manual for TS
	June 2009	Train Technical Services Staff on TS Policies & Procedures
Virtualization - Server and storage with green IT *Provide process, tools and controls for virtual server environments and establish a virtualization center of excellence*	**June 2008**	Server Virtualization Product Readiness
	December 2008	Storage Virtualization and Archiving
	December 2008	Implement Governance Structure
	December 2010	Statewide Adoption

Key Drivers and Actions

- **Service-Oriented Architecture (SOA) and Open Source Development:** The challenges of supporting application environments are increasing in size and complexity. More solutions are being developed in open communities where the infrastructure foundation is required to balance easy access with security and configuration management. Projects like Michigan's Business Improvement Initiative are pushing the boundries of our current technology and introducing integration middleware and the first statewide enterprise service bus. Once mature, these projects will be leveraged across the enterprise.
- **Consolidation:** Successful consolidation has placed increased demands on enterprise storage and backups, tripling the number of servers backed up and more than doubling the state's enterprise SAN. The team is re-architecting our solutions, maturing our support and allocation methods. Full virtualization of our storage is underway and a new backup solution has been scaled to meet current demand and scale well into the future.
- **Virtualization:** Increased demand means that Technical Services needs to use every spare cycle on our CPU's and conserve all the power possible. Working with our Department of Labor and Economic Growth, our administrators are piloting the state's first virtualization service for production systems. Using best practices, the team is defining the support methods and configuration disipline needed to maintain a complex, virtualized environment.
- **Security:** Attacks are on the rise and now, more than ever, standardized environments are critical to ensuring the state's data and systems remain secure. Technical services is leading the charge in MDIT and has developed standards for all new Unix and Windows servers. The team is also looking closely into standard processes and practices for the existing systems, implementing best practice settings across all our environments and removing unnecessary access.

Initiatives

The following initiatives will be developed and implemented over the next five years:

- **Enterprise backup and recovery improvement:** Restore policies, processes and quality assuance (QA); expand use of virtual tape library and migrate archives to read only storage
- **Security enhancements:** Patch management, operating system (OS) base lining, event log handling, administrative access control – implementation of separation of duties
- **Centers of excellence:** Citrix, virtualization, and server support for; call centers, identity management, document management, presentation services, database servers and other emerging technologies.
- **E-discovery infrastructure**: Support archiving solutions and implement separation of backup from archive
- **Define career path & staff development:** Improve civil services classifications to align with industry classifications; up-to-date technical training; succession planning
- **MiDEAL:** Extend negotiated discount levels for storage solutions and servers to locals
- **Testing lab modernization:** Patches, upgrades, restores and emerging IT research

Partners in Delivery

In carrying out these plans, resources will be utilized from across and beyond the Infrastructure organization. The teams involved include:

- Office Automation
- Office of Enterprise Security
- Agency Services
- All state agencies

Technical Services in Action

Managing Michigan's Storage & Back-up

Technical Services' Storage Management Section is providing storage solutions for servers located in the state's three Lansing-area enterprise hosting centers and the remote development sites.

The state's Storage Management Section is responsible for all aspects of the storage area network (SAN) and its' resources such as disk arrays, inter-site connectivity (including physical tape libraries) and virtual tape libraries.

To keep in lock step with storage strategic directions, backup infrastructure is continuously assessed for workload manageability and capacity improvements. Furthermore, a cross-organization Backup Action Team has been formed to provide governance on policies so the emerging needs such as e-discovery, tighter recovery point objectives (RPO) and recovery time objectives (RTO) can be managed in a proactive basis.

G Infrastructure Services

Adding Value

"The Videoconferencing services provided by Telecom have been instrumental in helping MDOT conduct internal and external meetings with staff and peers from around the world. This technology is viewed as a cost-savings model entwined with technology to have more staff participating in external meetings than what a travel budget or restrictions may allow, but equally important is the ability to utilize the technology as an integral business function in the future."

~ Brad Stoddard, Client Services Director supporting MDOT

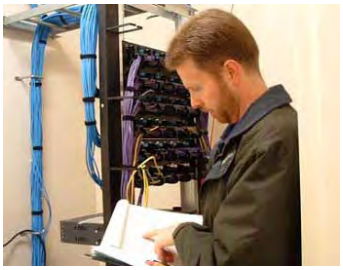
"DLEG business operations distributed across the state can operate in a consistent manner without regard to location thanks to our highly reliable networks."

~ Don Eitniear, Client Services Director DLEG

The Telecommunications Service Catalog that Telecom publishes has a wealth of information on the types of services offered and the information required to order the services.

~ Tess Layman, Agency Services Director supporting DHS

Telecommunications



MDIT Telecommunications (Telecom) acts as the information superhighway and telephone company for state of Michigan executive branch agencies. By providing high-speed data communications and telephone services in support of the executive branch agency operations, Telecommunications enables government's successes and connects Michigan with services that are secure and reliable.

The challenge for Telecom is to create a nimble, responsive telecommunications framework that meets the short- and long-term needs of the state's employees and citizens. Governor Granholm's administration has set Michigan on the path of reinventing itself as a more efficient and effective government. This is reflected in Goal 3 of this IT strategic plan: Manage technology to provide better service and secure faster delivery. Telecommunications can be either the chief enabler or the biggest hurdle in meeting these IT priorities.

Scope of Services

With 83 employees, Telecommunications currently connects 55,000 state employees across 1200 locations and manages the telephones and networks for 27,000 state employees. This team runs the cable, installs the data line, brings the phone to your desk and supports your office. Telecommunications works to support tomorrow's strategic priorities and current agency business drivers. Its spectrum of services includes:

- Statewide IP network design and operations
- Internet-access design and operations
- Remote access to state network applications
- Statewide telephone and voice-messaging design and operations
- Call center telephony support
- Network security operations
- State telephone operators
- Cable and fiber between and within state office buildings - design and maintenance
- Video-/Audio conferencing management
- Cellular service contract management

Top Initiatives	Milestones	
Hosting center enhancements *Added bandwidth, virtual hosting center support, enhanced security*	December 2009	10 Gig to all Data Centers and add Virtual Switching Capability
	September 2010	Increased Security for Internet Applications
Fiber plant enhancement *Increase fiber capability and capacity*	September 2008	Additional Lansing-area Fiber Installations
	March 2009	Increase Number of Fiber Co-locations with Major Telecoms
Voice over Internet protocol (VoIP) and time-division multiplexing (TDM) *New voice technologies*	September 2009	Centralize VoIP Management
	September 2009	Unified Communication & Collaboration Tools in Place
	December 2010	50-75% Migrated
Strategic Telecommunications Training Plan	September 2008	Develop and Budget Role-based training plan
CSC Call Center Consolidation & Centralization *Standardize and combine call center implementation*	December 2010	Standardized/Centralization
	June 2012	VOIP Expansion Migration to New Technologies

Key Drivers and Actions

- **Convergence:** Increasingly, voice and data communications are converging into a single service. VoIP phones are replacing our plain old telephone service (POTS) lines with IP-based models that use the state's data network as their backbone. This reality has a dramatic impact on our state's strategy for communications. Demand for this service is on the rise as the voice-network infrastructure ages and agencies search for low-cost alternatives for providing the service. Telecommunications must balance this cost-cutting demand with the loss of the high reliability that exists in voice services. Our engineering teams are developing services that can offer our clients the best of both worlds. The trend toward convergence has already driven efficiencies like PBX consolidation and will ultimately result in telephony-based applications that are increasing in size, complexity and value.
- **The Remote Worker:** Wireless access from anywhere at anytime is the hallmark of MDIT's strategic plan. Whether it's enabling the mobile worker or meeting the imperative of pandemic planning; Telecommunications has a pivotal role to play. Wireless services have been piloted and will be rolled out across state facilities.
- **Service Management:** As a service organization, MDIT is coordinating its use of service applications such as Remedy and our monitoring tools. As these tools mature and their use in MDIT expands, Telecommunications processes will be affected and, as a critical step in delivering value to our citizens, internal processes will need to be reworked to increase the efficiency of all our teams.
- **Security, Capacity and Engineering**: The state's network is an ever-evolving enterprise. Every year applications and agencies require more bandwidth to get their job done. Our engineers are continually securing, re-working, optimizing and architecting for increased demands. These demands can come from large-scale development initiatives, changes in user needs (streaming video, etc.) or security threats. Telecommunications works in partnership with the rest of IS to stay one step ahead of the demand.

Initiatives

Initiatives for the 2008-2012 planning cycle are as follows:

- **Internet expansion:** Expand bandwidth for multi-media use and business services
- **Bandwidth upgrade:** Increase overall bandwidth in the wide-area network as well as the Lansing metropolitan network
- **E-911:** Allow access to 9-1-1 from all state phones
- **Unified communication & collaboration:** Leverage Internet protocol telephony (IPT) installations and standards to build Michigan's collaboration infrastructure
- **Voice consolidation and centralization:** Upgrade and consolidate private branch exchange (PBX) switches to save costs and increase agility
- **Rate simplification and rationalization:** Create user-friendly, telecommunications rated services
- **Enterprise-managed LAN migration:** Standardize local area network infrastructure
- **IP TV:** Multi-cast and multi-media aware networks - for training, video on demand, and videoconferencing
- **Unified Communications Strategy, Phase 2**: Integration to wireless communications, presence-aware communications systems

Partners in Delivery

In carrying out these activities, resources will be utilized from across and beyond the Infrastructure organization. The teams involved include:

- Technical Services
- Agency Services
- Office Automation
- Data Center Operations
- Enterprise Security
- Local governments

Telecom in Action

From Crisis to Convergence

Human crises present enough challenges without an antiquated phone system that is unreliable and virtually unmanageable. A basic Voice over Internet Protocol (VoIP) implementation eliminated this problem for DHS while laying the foundation for next-generation converged applications.

The first phase of the state's VoIP pilot has been completed which migrated 77 of the agency's 148 sites.

"I appreciate the new system," says Jan Baszler, DHS director for Clinton and Gratiot Counties, who calls the VoIP system "very customer friendly." She divides her time between offices in the two counties, and the VoIP system automatically locates and routes incoming calls to her. Callers don't have to figure out which office to call, and intercounty calls avoid toll charges by traveling across the wide area network.

"As a dual-county director, I deal with matters that need attention the day they occur," Baszler says. The VoIP system allows her to conduct such business "quickly and with no additional expense. I appreciate that, as does my budget."

StateTech Magazine
October/November 2007

G Infrastructure Services

Adding Value

The Field Services staff supporting MDE's School for the Deaf are so committed to supporting the client that they are cross-training in sign language to provide greater depth of IT support for the school. This is a great example of the customer-focused commitment that is growing in Field Services.

-Scott Thompson, Client Services Director supporting DOE

Field Services willingness to step outside the normal bounds works to build partnerships and create a positive image of MDIT.

-Beth Dean, Client Services Director supporting DOS

"The service tech was Mr. SUNSHINE. In my short time chatting with him, I got a great feeling about MDIT and the fun team he works with.

-Holly Grandy-Miller, Office of Great Workplace Development

Field Services

The Field Services Division (FS) is the department's face-to-face contact with the client, providing frontline services for end users throughout the state. Focusing on maximum productivity, Field Services strives for minimal user downtime and the most efficient use of state resources and staff.

While field service may appear to be a simple task, there may be no more critical business process to the effectiveness and efficiency of MDIT. Field Services often has a direct impact on consumer safety, statewide liability and customer satisfaction.

Among the several teams within Field Services is the newly-created Field Services Core Team (FSCT). The FSCT provides an enterprise view, setting standards for each of the regions, ensuring consistency in project development and promoting inclusion and empowerment among the three sections of Field Services.

Scope of Services

The Field Services Division has 195 people servicing the needs of Michigan's 55,000 state employees across the state. They provide on-site support, including desktop standardization and new equipment installs, along with support services to resolve client problems, requests and questions related to end-user computers and related equipment. They work closely with the Office Automation Team on server assessments, installing servers, switches and routers.

Field Services is defined by several flexible teams ready to meet the needs of customers across the state. For service purposes, Michigan is divided into nine, distinct geographical areas. Staff is divided among thirteen teams from which service is provided whenever and wherever it is needed.

Field Services is moving toward a matrix organization where the organization will have cross-functional knowledge and support, growth of individual staff and managers, a teaming concept to meet the needs of our clients and the ability to leverage resources to meet changing needs.

Top Initiatives	Milestones	
Service Improvements *Redefine statwide service model and responsibilities*	June 2008	Creation of Field Services Core Team
	June 2008	Finish MI Support Documentation
	December 2008	Field Services Operations Manual
Leverage Success of M/1 *Incorporate desktop consolidation success to drive efficiency in daily work*	M/1 Rollouts: April 2008	DHS (Except Central) complete
	May 2008	DMB/DLEG complete
	May 2008	MDE complete
	April 2008	DEQ complete
	April 2008	Re-starting DNR
Leverage Staff *Re-align geographic regions/sections for better service delivery*	March 2008	Communication Plan
	April 2008	Plan is Effective
	June-Sept. 2008	Follow-up
Staff Development *Develop, reward and train staff; incorporate agency empowerment training*	December 2008	Plan developed

Key Drivers and Actions

Remote Worker: Demands for wireless offices and the increased prevalence of mobile devices will ultimately expand the role of the Field Services technician. As these devices become commonplace in the technical landscape of our remote offices, Field Services will need to rise to the challenge to provide support for multiple channels of accessing the state's applications. Training programs and formal support guidelines will be developed.

PC Leasing: MDIT will pilot its first, statewide PC leasing service in 2008. Leasing will bring rigid install requirements that will require our Field Services team to compress their install times to less than 5 days on orders up to 2000 units. Managers have worked to streamline the install process, and increase the information collected up front, to accommodate a program that will save agencies sorely-needed operational dollars.

Remote Support Enhancements: As MDIT defines its new service management approach, Field Services will have the opportunity to arm its technicians with complete service history, technical reference and dynamic troubleshooting guides at the technician's fingertips. By adopting advancements in the tools available, diagnostic time can be greatly enhanced, remote office inventories updated and the time to resolve problems decreased.

Initiatives

Initiatives for the 2008-2012 planning cycle are as follows:

- Problem resolution improvement: Improve response time to outages, equipment failures, and virus attacks
- Warranty repairs: Redefine warranty repair process to deliver same-day service
- New equipment installs: Enhance procurement/leasing processes to complete installation in five days (FS); new deployment process; Corrections leasing pilot (2000 PC's); problem resolution

Partners in Delivery

In carrying out these activities, resources will be utilized from across and beyond the Infrastructure organization. The teams involved include:

- Office Automation

Field Services in Action

M/1 Standardization in Progress!

When it comes to standardizing state government's computing enivonment, the Field Services Division is moving Michigan forward at a fast clip. The M/1 Adopt initiative is a statewide push to consolidate 19 different computing environments into a standardized, enterprise framework.

By reducing the number of systems supporting basic enterprise computing functions, such as directory services, file and print environments and desktop environments, costs are reduced and service levels improved.

To date, 18,000 workstations have been standardized—as many as 1,000 in a single week—with complete standardization targeted by the end of 2009.

G Infrastructure Services

Adding Value

"HURRAH for DIT service! Even though my Excel document was corrupted, someone found the previous version which I can now work from. THANK YOU, THANK YOU, THANK YOU!!!"
- Carol Twiss, MCSC

The tech was courteous, efficient and went that extra mile to get problem resolved quickly. Nice dealing with people of that caliber. Thank you!"
- Shirley Johnston, Michigan Department of Corrections

"You guys are awesome! I had two issues this morning with passwords and received excellent assistance. Thanks for all you do!"
- Bonita Fritz , Michigan Department of Corrections

"We are fortunate to have Office Automation on the front line of DIT's customer service model."
- Dave Borzenski, Client Services Director supporting Treasury

Office Automation Services

The role of MDIT's Office of Automation Services (OAS) is to bring Michigan government onto a common technology playing field. With over 61,000 desktops and 900 applications in operation, OAS is charged with transforming and simplifying the state's technology architecture and creating a centrally-supported, enterprise-wide, common office.

Standardization and shared tools are driving themes for OAS in its efforts to move Michigan closer to the consolidation finish line.

Scope of Services

With 175 employees, OAS' reach extends across the spectrum of state government and includes its ongoing push to provide a single desktop environment that supports all the business needs of the different state agencies and departments. They are the voice of MDIT and are responsible for the consolidated IT Client Service Center (CSC). The pairing of customer service with the organization responsible for delivery of remote support tools ensures that the service center receives the very latest tools in their quest to increase first call resolution.

Its services also include in-depth engineering that designed and updates the automated provisioning environment that allows for monitoring, distributing, patching and upgrading desktop software anywhere in the state on-demand.

In addition, OAS provides the development and support of wireless solutions, engineers the state's consolidated e-mail systems, technical training and an inventory depot for the most effective tracking and delivery of equipment, The organization is comprised of the following units: Administrative Applications; Client Service Center; Computer Help & Training; Depot; Design & Delivery; Messaging; MIPRINT Services; Service Delivery; Technical Training; and Wireless Support

Top Initiatives		Milestones
Remote / mobile workers *Expand support and infrastructure to enable Michigan's mobile workers*	August 2008	Endpoint Security Monitoring Mode
	August 2008	Implement the first release of Next Generation Laptop
	October 2008	Convert VPN Users to Soft Token
	December 2008	Provide Field Services support for Next Generation Laptops
	March 2009	Implement Data Encryption
	March 2009	SCCM Internet Support
M/1 ADOPT *Standardize state of Michigan's office infrastructure*	Nov. 2008	Attorney General's Office migrated (860)
	March 2009	30-35,000 Desktops migrated
	October 2009	Corrections migrated (8,500)
	December 2011	All agencies migrated to M/1
Customer service improvement *Increase help desk first call resolution to 75% and implement automated password reset*	October 2008	Implement an e-mail response management system
	October 2008	Implement 2nd level support at CSC
	March 2009	Automated password reset and network e-mail
	March 2010	Implement Knowledge Base
	October 2009	Implement Self-Service portal

Key Drivers and Actions

Remote Worker: The state must plan for new threats such as pandemic flu and, in these budget conditions, every measure must be made to reduce travel and allow our workforce to complete their workflows while still in the field. The demand for mobile applications delivered on cell phones and PDA is on the rise and our state police have begun to use Blackberries as their access point for background checks. These realities have driven our OAS architects to develop new solutions for the mobile worker. Working hand in hand with Telecommunications, OAS has developed a model that takes the state office on the road and allows our workforce the flexibility it demands.

E-Discovery: Across the nation, the legal demand for immediate access to electronic mail, stored documents, data and systems output has never been greater. In this business environment the stakes for getting e-discovery right are high. Our OAS engineers are working on part of that solution with our Agency Services partners, we are developing solutions that will allow IT and legal organizations to search and retrieve content instantly. Transforming manual processes into an enterprise asset that lowers discovery costs, improves litigation support and enables internal investigations.

Security: The papers are riddled with stories of stolen identities as the result of lost or stolen PC's and laptops. In recent years Michigan has twice been the victim of well-meaning employees introducing viruses into our network after remote equipment was brought back from the field. OAS has worked with the Office of Enterprise Security to develop a comprehensive program of standardization, endpoint and encryption solution to protect against hackers, malware, protocol attacks and more, keeping security invisible to the end user. This offering will be available to all standard Office environments.

Standardization: All of the drivers above lead to one inevitable conclusion. To deliver the services needed in Michigan's immediate future, the state office must be standardized, streamlined and highly controlled. The key to being responsive to business needs is to understand each and every component of the solution. The MI/1 ADOPT project is making this level of service a reality. OAS is moving rapidly through the state consolidating and standardizing file and print services, the desktop itself and security solutions for each and every state worker.

Initiatives

Initiatives for the 2008-2012 planning cycle are as follows:

- Endpoint security: Implement secure solution for mobile devices
- Asset management: Improve infrastructure asset inventory capability
- Data consolidation to M/1 Windows cluster: Enhance and complete file and data migration to centralized solution
- Implement e-mail archiving solution
- Select archiving solutions
- Identity management: Create user provisioning at the help desk
- E-mail security: Virus protection within e-mail system enterprise wide

Partners in Delivery

In carrying out these activities, resources will be utilized from across and beyond the Infrastructure organization. The teams involved include:

- Office of Enterprise Security
- Data Center Operations
- Telecommunications
- Client Service Center
- Field Services
- Local government partners

Office Automation Services in Action

Award-winning email consolidation

After years of scrambling to meet increasing messaging expectations, Michigan found itself in the same situation many states face: aging infrastructure and a complex maze of solutions that impeded communication and resulted in unnecessarily high costs.

Through the E-mail Consolidation Project, MDIT enabled strategic priorities, brought stakeholders together, defined a common messaging platform and implemented a cost effective solution.

Dividends of the investment include: Projected savings of over $11 million in 4 years; a 50 percent increase in service levels and response time; enhanced security and resistance to virus attacks; and reallocation of over $1.8 million in personnel costs.

Solving this dilemma required an understanding of the departmental business value of e-mail as well as development of a strategy supporting specific needs, while maintaining an enterprise focus.

By showing the alignment to business priorities outlined in the Governor's Cabinet Action Plan, and collaborating early, MDIT developed its approach with the benefit of agency support.

Excerpt from the National Association of State CIO's (NASCIO) "2006 Best Practices in the Use of Information Technology in State Government"

G Infrastructure Services

Adding Value

"It is readily evident that Data Center Services understands the critical nature of the child support hardware/software environment. There have been multiple occasions where DCO and IS staff have stepped up to either help avoid or to restore a loss of service to our clients. By all accounts, they will own the problem and make every effort to attain a rapid, low impact solution."

- Jim Fricke, Client Services Director supporting CSES

Hosting Center Facts

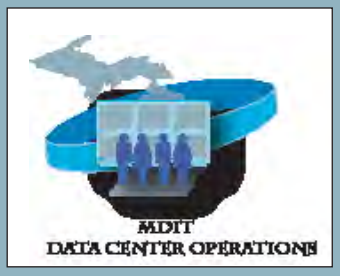
One of the tape cartridges used by DCO (the 9840) can store almost 500 GB of data. If we were to use reel-to-reel tape from the 1950's to store that much data, the stack of reels would be 15 times the height of the 1,000-foot tall Eiffel Tower!

The state's hosting centers store around 1.8 petabytes (PB) of data. Two PB holds all of the contents of the U.S. academic research libraries,

There is currently over 30,000 square feet of raised floor environment in the state's data centers.

The state has 5 critical mainframes.

The Mainframe Consolidation project will avoid $12 million over five years in reduced hardware maintenance and software licensing costs.



Data Center Operations

Data Center Operations (DCO) is responsible for providing centralized hosting services for all of Michigan's state agencies. This includes the acquisition of hardware and software, operational and technical support for a variety of mainframes and over 2,000 servers. DCO monitors system performance and recommends improvements to achieve the highest security, performance and responsiveness. With an ITIL-based service delivery organization—IT Infrastructure Library—employees are trained and organized into groups based around the following:

- Service Management Center: Problem management and incident management
- Enterprise Monitoring: Responsible for enterprise monitoring
- Configuration Management: Responsible for comprehensive CMDB and best practices
- Facilities Management: Oversees the data center facilities

Scope of Services

DCO strives for consistency and works toward consolidation whenever possible. They utilize skilled staff to provide cost-effective IT services by managing and maximizing the power of technology and processes. DCO manages the Information Technology Infrastructure Library (ITIL) which contains incident, change, configuration and release management processes, as well as enterprise monitoring services, media library services, mainframe technical services and disaster recovery service.

Additionally, as Michigan moves forward with new technology, DCO continues to bridge yesterday's technology to today's needs through its legacy operations, thereby ensuring sustained service – all day/every day – across state government.

Top Initiatives		Milestones
Enterprise monitoring *Rollout/consolidation of tools and staff*	September 2008	**Aperture**
	September 2009	**Enhance the CMDB**
	September 2009	**Automated Server Polling (ASCID)**
	September 2009	**Enterprise Monitoring Consolidation/STD**
	December 2008-11	**Data Center Enhancement Request Green IT**
Enterprise monitoring *Legacy platform management*	December 2005	**13 (M/F)**
	December 2008	**Migrate Data Exchange Gateway**
	December 2009	**Develop Data Warehouse Strategy**
Implement continuous quality improvement recommendation	May 2008	**Solutions Engineering–IMAC**
	October 2009	**ITIL (Mature) Process**
	March 2009	**Develop Service Catalog**
Disaster recovery process *Build disaster recovery process for critical applications*	September 2008	**Identify Infrastructure Assoc.**
	March 2009	**Identify Process, Staffing and Funding**
	September 2008	**Complete Assessment**
	December 2008	**Implement Tools, Identify Apps.**

Key Drivers and Action

- **Green IT:** With major successes in our consolidation efforts, IT discussions of cost savings have evolved to concerns over energy efficiency. Faced with the issue of an energy-efficient data center, DCO staff are looking for ways to optimize the state's computing environment to benefit the taxpayer's bottom line and our planet. Consistent improvement that drives updated equipment standards, facilitates best practices and continues to evolve as new solutions are being developed.
- **Disaster Recovery Planning:** DCO's hosting centers house nearly 50 applications considered our state's most critical business functions. Agency Services and DCO teams are mapping critical systems functions ranging from law enforcement to those that keep our food supply safe. The critical nature of these systems demands a full analysis of our ability to recover from an outage and an ongoing commitment to maintain our capabilities.
- **Monitoring and Control:** Today we are faced with a complex network of disparate monitoring tools and capabilities. DCO has taken the lead, working with Enterprise Architecture and all of IS, to develop solutions that bind our service management strategy together and give our technical support staff a clear view of daily operations.
- **ITIL Maturation:** DCO is organized and trained around ITIL components: incident management, problem management, change management, release management and configuration management practices. Today's challenge is to mature and extend the reach of ITIL practices to all of IS and to integrate these processes with the SUITE framework across MDIT.

Initiatives

Initiatives for the 2008-2012 planning cycle are as follows:

- **Transform current data centers:** Improve, upgrade and expand capabilities of Michigan's current hosting centers to make them more agile/flexible and adjustable
- **Service catalog:** Refine the suite of standard infrastructure services and rates
- **Solutions engineering:** Streamline server configuration, procurement and release
- **ITIL implementation:** Implement and refine processes for incident, change and release management
- **Green IT:** Reduce power consumption and implement green standards
- **Configuration management:** Maintain configuration management database and refresh wiring standards
- **Data center enhancement request:** Set the course for Michigan's future data center needs
- **Legacy platform management:** Improve and integrate Michigan's mainframe and legacy technology

Partners in Delivery

In carrying out these activities, resources will be utilized from across and beyond the Infrastructure organization. The teams involved include:

- Agency Services
- Field Services
- Office of Enterprise Security
- Telecommunications
- Technical Services
- Office Automation

Data Center Operations in Action

Award-winning consolidation

Centralization and consolidation are hardly new topics to state government. What is new and interesting is the scope of consolidation that is now possible and the significant savings and government transformation that are being realized. The critical ingredient to this level of success—at least in the Michigan example— has been collaboration....

Specific benefits of Michigan's Data Center Consolidation are well documented: $9.5 Million saved to date (with an estimated 5-year ROI of $19.1 million); elimination of over $375,000 a year from facilities environmentals and leased space cost; savings of $403,000 per year in hardware maintenance cost; avoidance of $7,313,245 in capital costs to upgrade legacy data centers/computer rooms; and 29,062 square feet of floor space regained

But the ROI is only half the story.

Michigan's successful efforts of the past—mainframe consolidation, telecommunication consolidation and the print center consolidation projects—were all accomplished with clear, imperative and visible executive mandate (in the form of an Executive Order from the Governor). But what happens when the mandate cools, when the urgency fades and agencies begin to tally the costs? Consolidations of this magnitude are measured in terms of years, not months....

In the end, the collaborative approach is what has seemed to matter the most. A commitment to collaboration has given Michigan a technology climate where agencies now openly request to get their remote locations closed. The project team now has a waiting list of locations targeted for closure. This approach has helped cement a reputation for quality, built trust with clients, and set the stage for more fundamental initiatives that reach across government boundaries such as virtualization, SOA, and shared services.

Excerpt from the National Association of State CIO's (NASCIO) "2007 Best Practices in the Use of Information Technology in State Government"

Infrastructure Services Alignment

Our philosophy in Infrastructure Services is that strategic planning must be done as a holistic activity. Every project we undertake is an opportunity to move the state one step closer to its goals; one more brick laid in tomorrow's technical foundation. Each plan developed is done with a purpose, aimed at a long-range objective for the state. These objectives are articulated in the MDIT Strategic Plan and serve as the basis for all infrastructure planning. Included in the pages below you will find the alignment of every initiative outlined in our plan.

To develop our plan and enable this alignment, in March of 2008, IS managers met with representatives from the governor's office, Enterprise Security, Enterprise Architecture and Agency Services in a two-day, off-site workshop to look at the issues, challenges and solutions through the eyes of our customer agencies. The workshop challenged us to look at leadership though new eyes and find ways to better communicate with each other on critical issues of innovation, process and management.

1 Access	2 Service	3 IT Management & Infrastructure
Green IT	Hosting Center Enhancement	Fiber Plant enhancements
Configuration Management	Bandwidth Upgrade	Asset Management
Enterprise Monitoring	Call Center Consolidation	Standardize state's office infrastructure
New Data Center Request	E-911	Data Consolidation to M/1 Windows Cluster
Legacy Platform Management	Problem Resolution Improvement	Implement E-mail Archiving Solution
Transform Current Data Centers	IT Service Management	Automated Password Resets
Disaster Recovery	Improve availability and recovery of critical systems	Identity Management: user provisioning
Internet Expansion		Increase Help Desk first call resolution
Remote/Mobile Workers		Enterprise Backup and Recovery Improvement
Endpoint Security		Implement Security Enhancements: Patch Management, OS Base lining, Event log handling, Administrative access control
Enterprise Mobile Device Data Encryption		Centers of Excellence
		E-Discovery Infrastructure
		Refine service catalog standards and rates
		Solution engineering for server configuration and procurement
		ITIL implementation
		Service improvements
		Leverage desktop consolidation success
		Redefine warranty repair process
		Improve new equipment install process
		Unified Communication and Collaboration
		Voice Consolidation and Centralization
		Rate simplification and rationalization
		Enterprise-managed LAN

For two days, the combined management team worked in small groups to clarify goals and prioritize initiatives. They aligned our team's priorities with the goals of the state and the MDIT strategic plan. During the workshop, our leaders considered some important questions;

- What direction are the services we provide moving globally?
- How does my work support the goals of the governor?
- What do the other infrastructure teams need from me?
- What does it mean to be a leader and what can I do to be a better one?

These questions and this workshop drove the alignment between infrastructure activities and MDIT strategic goals as illustrated below.

4 Great Workplace	5 Cross-Boundary Solutions	6 Innovation & Transaction
Leverage Staff	MiDEAL: Extend negotiated discount levels for telecommunications, storage solutions, servers and software to other state and local governments	E-mail Security
Develop Telecommunications Training Plan		Virtualization
Define Career Path		Testing Lab Modernization
Technical Training and Development Plans		Backup Enhancements
		IP TV: Multi-cast and multi-media aware networks
		Virtual Call Centers
		Unified Communications Strategy Phase 2

Michigan 2008-2012 *Strategic Goals*

Goal 1	Access: Expand Michigan's services to reach citizens and businesses anytime, anywhere.
Goal 2	Service: Deliver efficient and effective technology services and shared solutions to the agencies.
Goal 3	IT Management and Infrastructure: Improving operations, security and reliability through statewide solutions and universal standards.
Goal 4	Great Workplace: Support a high-performance workforce.
Goal 5	Cross-Boundary Solutions: Foster partnerships across and beyond state government.
Goal 6	Innovation and Transformation: Drive innovative processes and technologies to transform Michigan's government service.

G Infrastructure Services

Infrastructure's Magnificent Milestones

- Consolidated 70 e-mail versions to 7
- 700 e-mail servers merged into into 70 centrally-hosted and maintained servers
- 29 data hosting centers consolidated to 3 state-of-the-art, secure data centers
- 7,000 DHS lines converted to VoIP technology at 80+ different locations
- 18,000 desktop workstations standardized with more to come

History in the Making: A Shared Infrastructure

Standardizing technology is a daunting task, to say the least, but that is what Michigan took on, both figuratively and literally, in the 1980's when the state ambitiously targeted shared technology across government.

The complexity of the environment was incredible. Data within the state were stored on myriad devices in numerous formats, across so many data centers that no one could get an accurate count. With executive support at the gubernatorial level, the first generation of consolidation began to take shape around the state's network. Once success was underway in the communications arena, the focus shifted to mainframe centralization.

In 2001, MDIT was created by Executive Order to completely centralize the state's IT resources into an enterprise-managed department. Over 1,600 IT employees were re-assigned from the agencies they had worked in, and whose business they knew, into this new department.

Business was to change, but no roadmap was provided. Customers and employees were not shown how their needs would be met or what measurable benefits would be achieved by this new department. A huge cultural change was required for this enterprise approach, but the organization was not defined; roles and responsibilities not articulated and operations continued to function in their de-centralized manner. During the initial days of the consolidation the state's employees continued to get the job done despite the fact that there were many organizational questions unanswered. Working (and sometimes stumbling) together, the vision for MDIT rapidly took shape, strategic plans were developed that aligned with the governor's Cabinet Action Plan and progress began to come in waves.

Michigan successfully consolidated 70 e-mail versions to 2 and merged 700 e-mail servers throughout the state into 70 centrally-hosted and maintained servers. By year-end 2007, data were moved from 29 different hosting locations to 3 state-of-the-art, secure data centers where massive amounts of data are now stored, utilized and monitored. And in telecommunications, Michigan took a monumental step forward with the successful implementation of VoIP within the Department of Human Services where 7,000 lines were converted to VoIP technology at over 80 different locations.

Infrastructure Services teams are proud stewards of the legacy left us by those who have come before, each generation adding building blocks for the next and building a heritage of excellence that has spanned nearly three decades. Our chapter in this story will reach further and dig deeper than ever before. This is truly a defining moment for IT in Michigan. It is no accident that today we stand so close to the finish line. Every project, every process improvement and every difficult decision made has brought us to this point. It has been a long road and our teams have made mistakes along the way, but the commitment to learn from them and to create a better future has always prevailed. We did not make the promises of consolidation made so long ago, but we will be the team to deliver.

Our consolidation journey has taught us much about the barriers that lay ahead. In Michigan, our strategic next steps are clear - to expand beyond the traditional borders of government and lead the way toward true partnership with our businesses, local governments and fellow states. More than ever before we stand on the cusp of realizing the true promises of e-government.

Commonly held myths were dispelled:

Myth #1: Consolidation costs too much

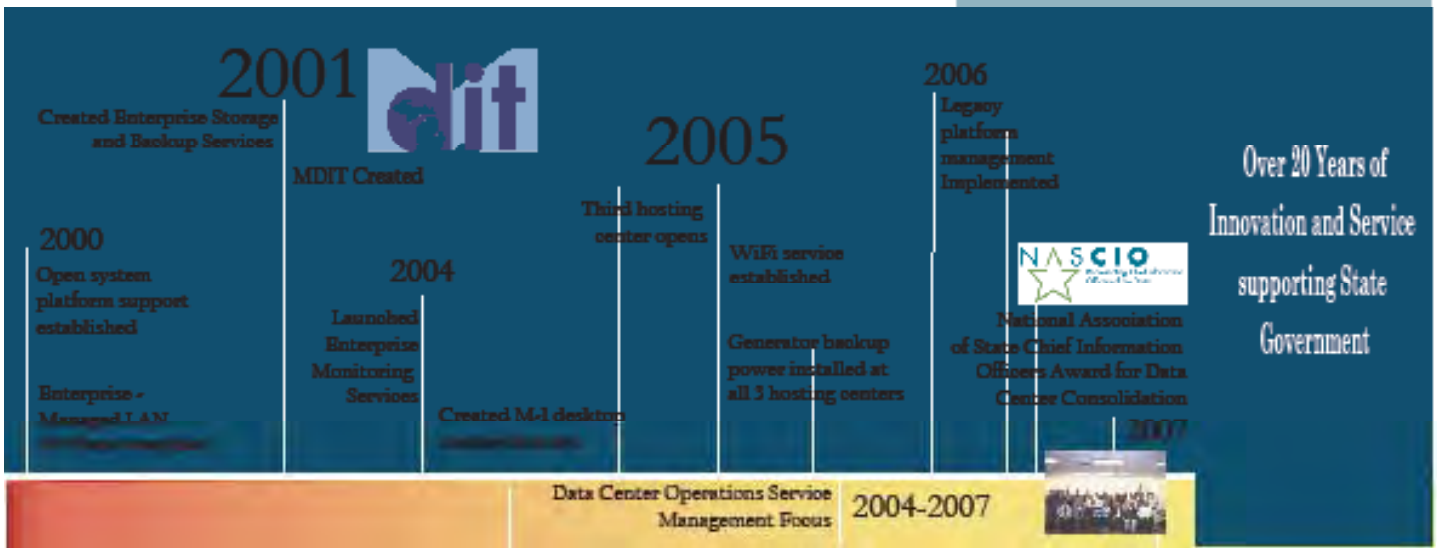
The need to reduce costs has been the primary reason our consolidations were successful. Our teams have found ways to make progress within the tightest budget conditions in our state's history.

Myth #2: There are too many federal and legal requirements

Our consolidated services and hosting centers have met every technical and legal requirement thrown at them. The rated service models developed for our IS organization have passed federal guidelines and have created a financially-viable structure based on business demand.

The barriers of the past can be overcome, but we face additional hurdles as we continue to stride toward cross-boundary collaboration and government transformation. They boil down to two issues: trust and fear of losing control.

There are no quick fixes to effectively deal with these issues. Infrastructure Services must first PROVE that our teams have instituted operational excellence. We have come along way, but there is much further to go. If the State of Michigan is to be the catalyst for collaboration among cities, counties and municipalities, our organization must be the very model of disciplined, uniform and repeatable excellence. Our challenge is to answer our critics and the fear of the unknown with credible facts, objective metrics and undeniable customer service.



Start by doing what's necessary, then do what's possible, and suddenly you are doing the impossible.

- St. Francis of Assisi

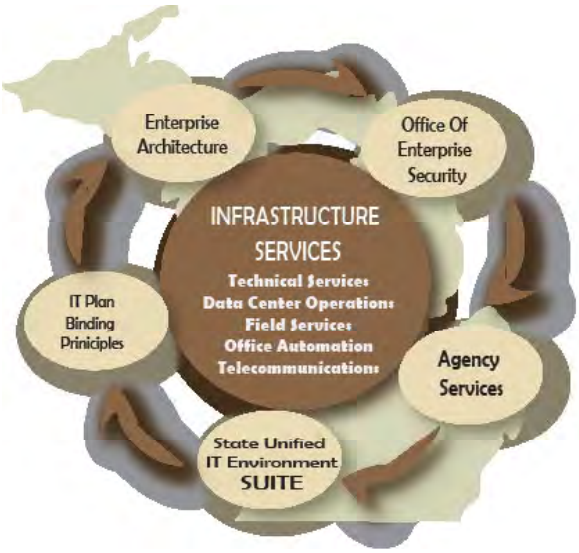
Implementing the Plan - From Vision to Action

Making this plan a working document requires more than simply listing initiatives and proclaiming a vision. The process started with the Cabinet Action Plan, a statement of the governor's business priorities. The business priorities drive budget decisions, plans and timelines for the entire executive branch of Michigan's government. From this point came the MDIT statewide IT plan which translated business imperatives over a five-year period into actionable projects.

It is this detail that serves as a primary source of information in our Infrastructure planning. Our goal during the IS strategic planning process was to combine inputs and priorities into a forecast of demands on the infrastructure we support. By fully aligning our work toward the goals of the MDIT statewide IT plan with an understanding of the technology trends global government is facing, we are ensuring that our teams will be ready to support the demands of tomorrow.

Forecasting and alignment were the next step. The five Infrastructure Services teams provide the State of Michigan with an organizational structure that can promote excellence and specialization, but can also lead to a myopic view of the work we must accomplish. This specialization, while essential, presented a true hurdle in creating a dynamic understanding of our team's strategic direction. Bringing everyone onto the same page was critical.

Elevating this document of good ideas and priorities into an actionable plan will require commitment, collaboration and effort. The nature of our business means that we must remain open to changes in the capabilities of technology. The realities our state faces mean that we must remain committed to understanding the evolving needs of our citizens and the government that supports them. Our process will engage and repeat a cycle of consistent improvement. This plan is the first of its kind for our state, but it will not be the last.



United in Service
Dedicated to Excellence
Empowered to Deliver

Enterprise Architecture

Table of Contents

Additional appendices referenced in the Enterprise Architecture plan are available at:
www.michigan.gov/documents/dit/2007_EA_Strategic_Approach_206296_7.pdf

Vision of Action

We are pleased to present the 2007-2010 Enterprise Architecture (EA) Plan to fellow Michigan citizens, state of Michigan employees and valued partners. Our EA effort has been a five-year journey that has seen many ups and downs, resulting in significant maturation of our technology and planning approaches.

Looking across state government, we are continuously reflecting on, planning for and delivering alignment between public service needs and technical investment decisions. Given the level of effort involved in any EA initiative, we are constantly challenged "why?" Why spend the time, the energy and, more importantly, why spend the money? How does EA directly benefit our citizens? Questions that can stymie EA in both public and private sectors. Consider this:

- You can build a space shuttle for $1.7 billion (NASA)
- You can build a major league baseball park for around $300 million
- A 747 jumbo jet can be yours for $198 to $227 million (depending on the trim package)

It is inconceivable to undertake investments of this magnitude without clear plans outlining tasks to the smallest detail or executing plans without strong and pervasive oversight.

It takes structure and discipline to deliver value on a grand scale. A community spending $300 million on a ball park takes for granted that there will be running water in the bathrooms and that the field will be lit at night. We demand more than the basics; we want our stadium to be more than a building. We want it to drive economic development, invoke a sense of pride and hold a special place in our community. We want something extraordinary, something that "matters."

Technology is no different–let's look at the numbers. According to the Center for Digital Government, state and local governments invest a combined $58.8 billion dollars in technology annually. This equals 34 (and ½) space shuttles, an entire league of ball parks, and a fleet of jumbo jets (with the gold trim) each year. For the money that government spends on IT, citizens expect the basics. They want their driver's license renewed, they want their tax data to be correct and they want their roads well- engineered. They want all that and, for $58.8 billion dollars, they want and deserve more. They deserve technology that matters.

In Michigan, our philosophy is that we are called upon to be stewards of the public trust and tax dollars. We believe that our investment in technology demands a rigorous and structured approach that will deliver the most benefit to our citizens. Enterprise Architecture is the process that leverages our extensive planning in a way that aligns our technical investments to public service needs.

Michigan's journey through EA has taken many turns, encountered a few high hurdles and seen some remarkable successes. In the pages that follow, you will see our vision, our strategy and the tools that we are using to maximize our strengths and address our challenges.

A Look at the Great Lakes State

Michigan's agencies deliver essential services, making the state a better place in which to live and do business for our 10 million citizens. Michigan's Department of Information Technology (MDIT) has more than 1,700 employees and is responsible for over 3,350 servers and 55,000 computers. With such a large operation, Enterprise Architecture (EA)—the planning and aligning of technology to support public service needs across 19 state departments—is a critical mapping and planning process used by MDIT.

Which state services does MDIT support? All of them. Whenever a citizen files income tax, pays or receives child support, wins the lottery, applies for a driver's license or starts a business - MDIT helps make it happen. As a comprehensive roadmap and framework for the state's technology, EA designates the on-ramp and off-ramp of technology as well as IT standards and priorities to enable the state's business processes and achieve mission-specific objectives in a timely and cost-effective manner.
In today's tight budgetary times, providing technology solutions that save time and money for government and citizens is a top priority. Disciplined innovation is no longer a luxury, but a requirement. MDIT's technology innovation is mapped out by its Office of Enterprise Architecture (OEA). In consultation with key stakeholders, OEA sets technology direction, driving IT adoption and governance, and enabling Michigan to move forward.

Benefits of EA

Alignment to the mission: Putting your money where your priorities are

By setting standards and direction, EA positions technology investments where they do the most good. EA maximizes technology, ensuring that the State has necessary data and tools to deliver services in the most efficient way across all channels of government service.

Reduced costs: Giving back to the bottom line

The goal of Michigan's EA efforts is to reduce ongoing IT costs through volume purchasing, fewer support staff and simpler upgrades. Faster implementation and a simplified, easier-to-support environment result in better value and an improved bottom line.

Increased agility: Never having to say "We can't do that - our system isn't built that way"

EA frameworks provide a ready reference when major changes are demanded on tight time frames. Mapping standards and services with applications allows developers to quickly assess impacts and respond to change. A comprehensive architecture also enables faster design of new systems and ensures a smooth, rapid response to business needs.

Improved security: Keeping hackers off your back

In IT, security issues are a fact of life. On a daily basis, the state of Michigan blocks approximately 280,000 e-mail spam and virus attempts; 17,000 scans by hackers; and nearly 14,000 potential Internet browser-based and Web-defacement attempts. Through the use of strong automated protection tools and mandated security standards, the risk of identity theft, intrusion, data loss and system downtime are dramatically reduced.

Reduced technical risk: Downtime is detrimental to our citizens

EA lends itself to a stable and standard technical environment. The IT planning that happens through EA decreases reliance on old and unsupported technology, allows current resources to support more and reduces the need for expensive, specialty support staff. This translates to fewer systems outages and, in the event of a problem, faster recovery times.

Improved interoperability and integration: Immediate, reliable information is key

By defining standards and specifications for how state systems will talk to each other, the job of integrating multiple systems becomes easier. EA allows the state to make accurate information available, decreases the cost of sharing information and ensures that systems communicate correctly on the first try and for the long haul.

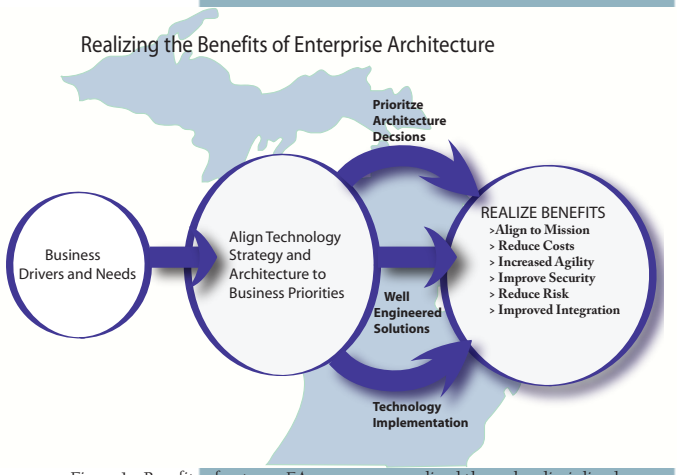
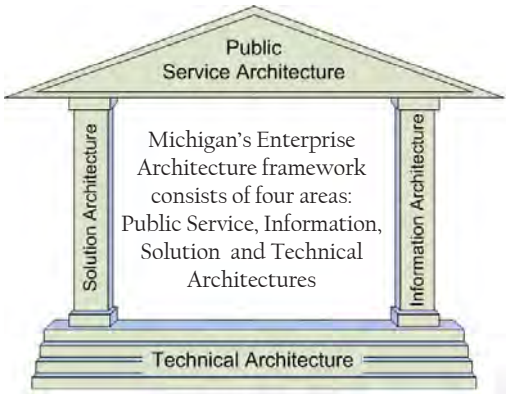


Figure 1 – Benefits of a strong EA program are realized through a disciplined approach, aligned to strategic goals.

Michigan's EA Framework

Michigan's Enterprise Architecture framework consists of four areas, as follows: Public Service Architecture, Information Architecture, Solution Architecture and Technical Architecture. More details on each area are provided in this section.



Public Service Architecture (PSA)

First and foremost, the PSA focuses our state's limited technical resources where they matter most to our clients: state agencies and citizens. We begin by obtaining a clear understanding of the goals, constraints and critical success factors. The next step defines and documents the processes most critical to state operations. With the PSA, Michigan has departed from traditional enterprise architecture bias and terminology. The unique nuances of public service and a need to clearly articulate priorities for technology staff demanded a different approach. Typically labeled Business Architecture in the private sector, Public Service Architecture directs government in the handling of necessary services for our citizens and sets the stage for the other three areas of Michigan's EA framework.

Information Architecture (IA)

Information is the key component of any system. For the state of Michigan, IA coordinates the use, reuse and sharing of state data. It models, classifies and leverages information needed to support key systems and enables cross-boundary initiatives with federal and local governments. IA focuses on identifying and standardizing innovative ways to use information.

Solution Architecture (SA)

SA is the framework and approach that governs how applications and systems are designed within the state of Michigan. Solution Architecture ensures that technology aligns with the goals outlined in the Public Service Architecture and with the data standards and structures from Information Architecture. SA streamlines the fulfillment of requirements and jumpstarts the design process.

Technical Architecture (TA)

Standard tools are the hallmark of a strong enterprise. TA is the technological toolkit serving as the foundation of all IT initiatives. It outlines the lifecycle and appropriate use for all state hardware and software products.
This framework area provides proven models for efficiently implementing standards-based systems.

Interactions Among the Disciplines

The value of Enterprise Architecture is derived from the sum of all its parts. As shown in Figure 2, the interactions within the EA framework create a complete picture of the processes that support sound technical decisions, an efficient organization and the creation of sustainable enterprise solutions.

Public Service Architecture captures changing agency needs, strategic goals, and environmental influences and translates them into information technology priorities for the state. PSA defines what is most important and answers the question, "Why?"

Both Information Architecture and Solution Architecture use the priorities and processes generated from the PSA to focus organizational resources where they will have the most impact. IA adapts information management standards to fulfill the state's requirements. Solution Architecture creates a repository of high-level design solutions. Together, these framework areas answer the question, "What?"

Technical Architecture is used in conjunction with the SA high-level designs to guide the assembly of technology components into complete solutions that can be leveraged to meet the needs of the multiple agencies. TA combines outputs from the other areas to drive standardization of products and develop consistent implementation/operational policies. This answers the question, "How?"

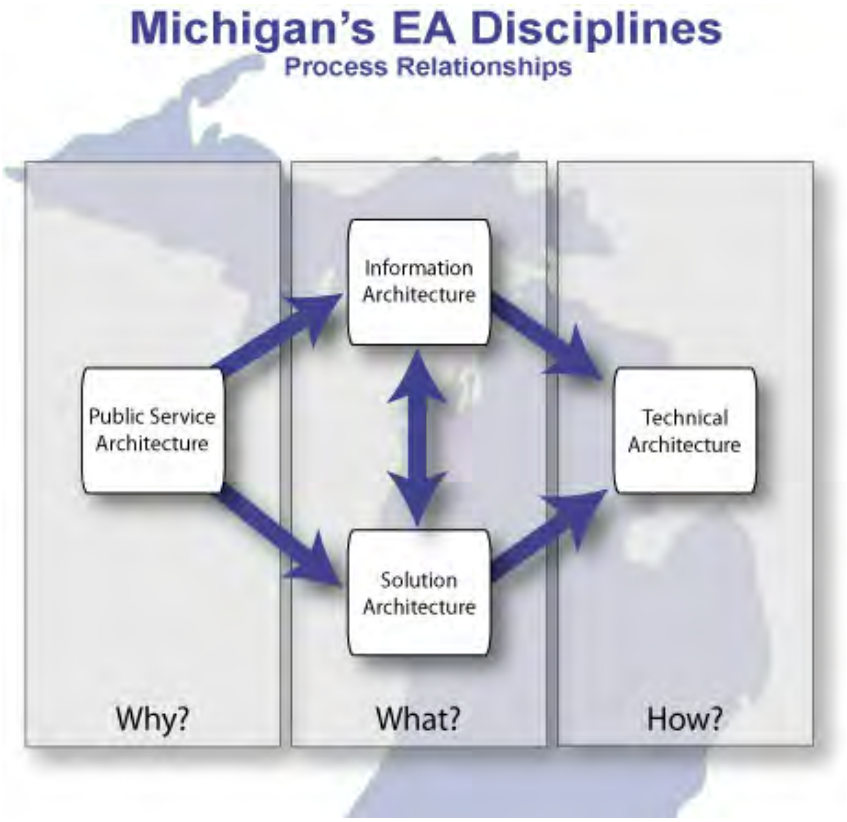


Figure 2 - The processes inherent in the four disciplines of EA interact in a continuous cycle. Initiatives may begin at any level.

Public Service Architecture

Public Service Architecture (PSA) uses Michigan's core priorities to determine the focus of EA. It captures the state's most important work activities, assets and processes. PSA focuses Michigan's limited technical resources where they matter most. To be truly effective, Enterprise Architecture must begin with a deep understanding of what drives the state. It is essential to align EA efforts to tangible business plans that have resources (money and people) assigned to them. Too many EA efforts flounder and fail because they lack detailed commitments, realistic scope and dedicated resources from the organizations that the architecture serves.

Assessment and Progress

Michigan leverages the state's executive branch planning process—the Cabinet Action Plan (CAP)—to define and reinforce technology initiatives. The Office of Enterprise Architecture examines the CAP and the IT strategic plan to determine the most beneficial Enterprise Architecture activities. This analysis results in a list of key drivers of our PSA and a specific work plan with detailed commitments. An explanation of the processes that created these drivers and how they relate to state goals and project prioritization is included in EA-Appendix A.

Statewide Business Drivers

In 2003, Michigan's governor set forth six priority areas to drive the statewide business planning across all state departments. In 2008, work continues in the priority areas and specific cabinet teams have been charged with action. The areas and specific cabinet teams are listed below:

- Education: High Quality Education/No Worker Left Behind
- Economy: Alternative Energy and Economic Development, Vibrant Affordable Communities
- Better Government: Government Savings, 21st Century Economy
- Health and Human Services: Affordable Care and Wellness, Children's Action Team
- Hometown Security: Safe Communities
- Environment: Alternative Energy and Economic Development, Quality of Life

Agency-specific Business Drivers

There are also business drivers specific to each agency. These are used to develop technology plans for each agency's specific needs, including:

- Creating an education lifecycle that presents a student's information as a common view
- Improving homeland security by integrating information and resources of all areas of the state of Michigan's criminal justice community
- Protecting Michigan's citizens and communities by operating safe and secure prisons
- Improving state and local preparations to deter, prevent and respond to disasters or terrorism. Continuing and improving the management of our state's natural resources
- Increasing access to state recreation areas (parks, forests, campgrounds and marina's)

- Protecting Michigan's citizens, retail markets and livestock
- Retaining and strengthening Michigan's existing manufacturing, agriculture and tourism base by creating new jobs
- Keeping Michigan's people and commerce moving by improving our roads and bridges and by increasing highway safety
- Expanding access to quality, affordable health care

Outcomes and Targets

The following outcomes will be achieved through Public Service Architecture:

- Develop Enterprise Architecture work plan aligned with Executive Branch and IT Strategic Plan priorities, detailing tasks and deliverables for the following activities:
- Service-Oriented Architecture (SOA) (Ongoing)
- Identity management (2008)
- Data warehousing and business intelligence (2008)
- Comprehensive mobile application strategy (2008)
- Hosting and data center consolidation (2008)
- Provide detailed business process flows and requirements for large-scale technology initiatives, including:
  - Health and Human Services eligibility systems (2008)
  - Michigan Department of State's business modernization initiative (2008)
  - Medicaid Management Information System (2008)
  - Michigan Integrated Tax Administration System (2009)
- Create a comprehensive plan focusing MDIT resources on prioritized EA initiatives and activities (Ongoing)
- Michigan Unemployment Insurance Agency system rewrite (2010)

See EA-Appendix A for more details on these objectives.

"Information technology continues to play a critical role in creating efficiencies, and it remains at the heart of everything we are doing to provide government service to Michigan citizens..."

-Michigan Governor Jennifer M. Granholm

Public Service Architecture in Practice...

The Chief Deputy Director for the Department of Human Services (DHS) has observed trends of increasing benefits error rates, worker stress and worker absenteeism in the county DHS offices responsible for issuing food and cash assistance, Medicaid and other assistance programs. Budgetary constraints and early retirements have lowered the number of available staff, while worker caseloads are increasing. These problems are made worse by a conglomeration of computer systems that force workers to spend more time on administrative work than on social work. Improving worker interaction with clients helps families move from welfare to self-sufficiency, improving the health and well-being of Michigan's most vulnerable citizens.

To address these issues, the Chief Deputy works with her counterpart in the IT department to create a project to build a new eligibility system to modernize and integrate the service delivery for DHS. The goals of the project are to:

- Consolidate several legacy systems into one, Web-based system
- Lower the administrative overhead for county office and case workers supporting DHS
- Provide better support for ongoing changes in eligibility policy
- Provide better service with fewer errors for DHS' clients

Identifying the problem and gathering the priorities through PSA helps DHS to define technology and better serve clients.

Information Architecture

Information Architecture (IA) is the process of maturing and governing the information needed to support the business processes and functions for state and cross-boundary initiatives. IA spans organizational boundaries and builds on the requirements identified in the PSA. It is primarily expressed in the form of standards for the creation of data models, information flows and an analysis of the decision-making criteria for each of the activities of the business. IA also addresses information access, data security, privacy and business and information continuity.

Assessment and Progress

Michigan's IA has grown exponentially as a result of inter-agency collaboration on specific agency projects, as well as related MDIT architecture and standards programs. The significant progress to date not only marks the quality and success of existing programs but also establishes the baseline for developing the Information Architecture approach.

Data Sharing

The sharing of data leverages federated, but definitive, information sources across areas to serve diverse public needs. This practice already exists between state agencies with other units of government (local and federal) and with our vendor partners. Types of data currently being shared include: hunting licenses, unemployment data, driver's license information, personal protection orders, customs data, Medicaid information and immunization histories. These and many other data types are used to detect fraud, increase compliance and protect our citizens.

Data Warehousing and Business Intelligence/Analytics

The practice of data warehousing and advanced business analytics are critical components of our decision support systems. They allow us to maximize shared data. To date, 2.3 terabytes of data are consolidated into our statewide warehouse. Analytics tools have helped:

- Locate 15,000 non-custodial parents, enabling enforcement action and child support collection
- Save $75-$100 million via statewide health care analysis with the Department of Community Health
- Decrease fraud and error rates in day care, food assistance and eligibility, saving over $61 million
- Increase productivity by enabling the annual review of over 452,000 tax returns by the Department of Treasury Tax Audit and Compliance staff

Cross-Boundary Information Sharing

Michigan's cross-boundary information sharing initiatives are expanding the use and communication of information across state agencies and beyond state government boundaries. Activity is underway in areas such as: health information networking, permit application processing, geographic information sharing and land use management.

The state's EA program is developing standards for sharing the massive amounts of information available from federal, state, local and private entities to improve decision-making and add citizen value. Examples of cross-boundary information sharing underway:

- Sharing location data via spatial Web services
- Standardizing electronic payments to the state with the Centralized Electronic Payment and Authorization System (CEPAS) initiative
- Creating a Michigan Information Operations Center (also known as a Fusion Center) to expand information and intelligence sharing between homeland security partners

Business and Information Continuity

A complete review of business and information continuity plans is in progress at the state of Michigan. Continuity requirements are being refreshed for the business functions supported by our most critical State systems in consultation with our clients. Simultaneously, an IT business and information continuity core team is documenting the existing disaster recovery and continuity capabilities and capacities that are available within the IT organization to support those business functions. Once these reviews are complete, projects will be initiated to close any exposed gaps.

Outcomes and Targets

Michigan's Information Architecture defines the information management needs and goals identified through the Public Service Architecture process, including:

- Defining owners for all information entities (2009)
- Establishing a common way of describing a citizen and the way the term is used in information systems (2009)
- Creating cross-agency policies for data sharing (2008)
- Develop an open document strategy (2008)
- Providing common data standards for all agencies and other government entity information (2009)
- Reducing data management centers to only three (2012)
- Personalizing views of content and applications for citizens, businesses and state employees (2010)
- Implementing consistent data exchange approach (2008)
- Defining data point-of-recovery (POR) objectives for critical business information (2008)

See **EA-Appendix B** for more details.

Information Architecture in Practice...

As the new eligibility system for Department of Human Services begins its requirements for Information Architecture technical staff consider the following scenario:

A couple that has fallen on hard times are seeking benefits for their family. Currently, a caseworker must access several systems, retrieve information from paper files and send out external inquiries to other agencies. The couple must wait for this process to complete, and they must trust that the caseworker can accurately obtain all of the relevant information.

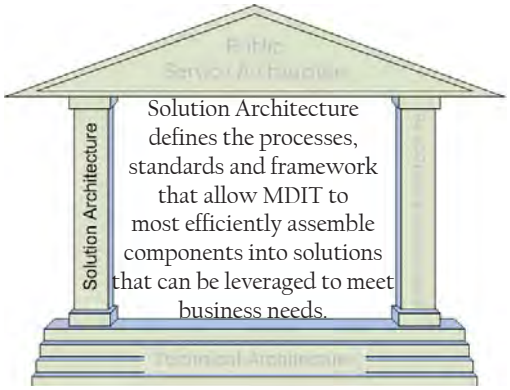
Inaccuracies regarding the couple's income could result in lower benefits or sanctions for over-issuance. The couple and caseworker alike are frustrated by delays and confusion.

As part of the new eligibility system, information-based requirements simplify the process of accessing and verifying data. The new system is designed to present the data from multiple systems to caseworkers in a clean easy-to-use interface, and direct access to verify income is required.

Data must be shared with other state of Michigan departments and multiple federal agencies. This will require standard file formats, communication protocols, etc. The project team ensures that all these requirements are clearly documented and followed.

Through IA efforts, the struggling couple is able to get the maximum benefits quickly while the state strengthens its ability to leverage information across systems by putting standards in place that protect the integrity, privacy and security of the data.

Solution Architecture



Solution Architecture (SA) defines the standards that allow MDIT to most efficiently assemble technical components into solutions by quickly identifying proven, standard and secure solution designs that can be leveraged to meet the needs of the business. Solution Architecture is expressed in terms of the solution patterns governing application design and evolution. Value can be measured in terms of reliability, scalability, performance, security and decreased support and maintenance costs.

Michigan's approach to EA intentionally separates Solution Architecture from Information and Technical Architecture. The key differences between the three disciplines are in the deliverables and outcomes, as described in the sections that follow.

SA Assessment and Progress

While the bulk of infrastructure and many key enterprise systems are currently leveraged across the state, Michigan is still in the early stages of our journey toward a strong portfolio of standard solutions. Although progress has been made with a number of key systems (financial and accounting systems, a single statewide portal, messaging consolidation, a thin client center of excellence, etc), most software development is still done within teams solely dedicated to a single department. In 2007 Michigan is rolling out a common solutions engineering methodology (SEM) that will standardize technical reviews (solutions assessments) and require all new development to leverage Solution Architecture.

Solution Patterns

In late 2006, the EA team began working on the concept of Solution Patterns. Solution patterns serve as the high level of system design templates. Patterns document the logical layout and form of a technology solution. It does not specify particular technology products, but focuses on the interactions of between components. For example, when building an Internet Web application, the solution pattern will identify the type of servers needed (application server, Web server, database server) and what types of protective measures must be present to ensure security (firewalls, security appliances, etc).

The process to develop a pattern is done through an iterative process. Utilizing the concepts highlighted in the EA Framework the Office of Enterprise Architecture commissioned a team to develop a base set of solution patterns. Working with a small work group made up of MDIT solution development and support team members, the EA core team identified highly mature, broadly utilized and stable solutions. These solutions served as the basis for the initial solution patterns and reference models.

Once a solution pattern is completed Technical Architecture processes are used to develop reference models and standards. (See Technical Architecture for details) Each solution pattern has multiple reference models and standards.

Reference models and standards give MDIT technical teams a complete reference of recommended products, best practices, designs, integration considerations and use standards for every solution pattern completed.

To date, solution patterns have focused heavily on Web-enabled applications, but as we gather information through our EA solutions review process, we will establish a repository of core solution patterns and reference models that provide a preferred architecture approach for the majority of technology projects.

Outcomes and Targets

Following are the state of Michigan Solution Architecture effort targets:

- Solution patterns will be established for the following areas (2008):
  - Service-oriented architecture
  - Identity management
  - Data warehousing and business intelligence
  - Comprehensive mobile application strategy
  - Hosting and data center consolidation
- A common solution assessment repository will be available to MDIT employees (2008)
- 100% of new technology projects will be reviewed through the EA solution review process (2008)
- 90% of existing systems will be assessed through the formal solutions review process (2010)

Please see EA-Appendix C for samples of specific solution patterns, reference models and details of the review process.

Solution Architecture in Practice...

Department of Human Services' new eligibility system identified the following requirements:

- The system must serve over 12,000 users
- Guarantee availability for 12 hours per day
- Be accessible across multiple geographic locations.

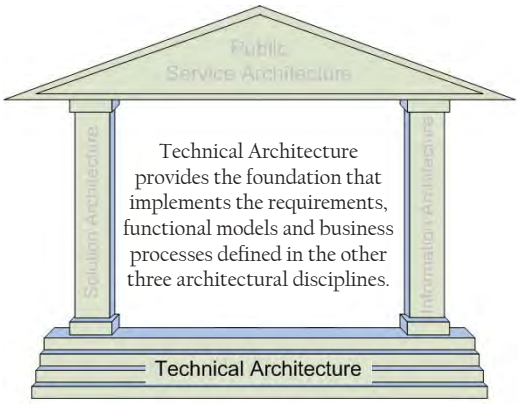
After reviewing these (and other) requirements, the project team works with EA to select the optimal solution pattern for their needs: A Web-enabled application with sensitive data.

Designs included in the solution pattern are specified in the state's Request for Proposal (RFP). If vendors have solutions that do not fall within the existing solution pattern, they are required to explain their rationale and total cost of ownership.

Once selected, the winning vendor completes a Solutions Assessment with the EA Core team. This assessment includes detailed technical documentation and is repeated at key stages in the systems development process.

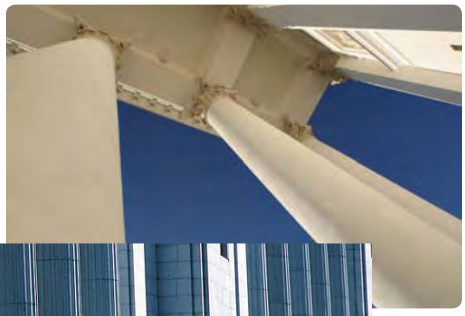
SA ensures that the new system conforms to the standard solution patterns. The choice of the optimal pattern guides the development team to a proven standard and secure solution.

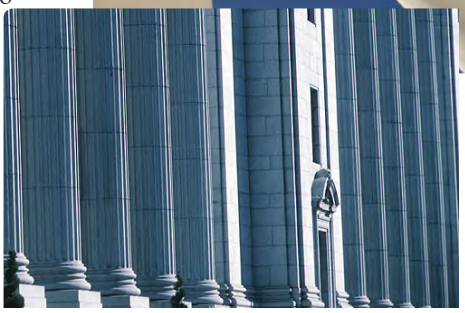
Technical Architecture



Making sound technology decisions and setting clear direction for the enterprise is one of the most visible EA activities. Maintaining a plethora of disparate products raises costs and reduces MDIT's ability to support the enterprise. Technical Architecture elements are coupled with solution patterns from the Solution Architecture to form a detailed picture of technology. TA is the foundation of the EA framework. It is the process that selects standard products, mandates best practices for their implementation, and manages each product's lifecycle throughout the enterprise. Decision making in the Technical Architecture is guided by the following guideposts developed within the EA framework areas:

- Best Practices and Usage Standards: Information captured from institutional knowledge as well as research vendors and partnerships.
- Policies, Standards, and Procedures: Developed within the TA as well as by administrative or legislative policy directive.
- Current Architecture Solution Patterns and Reference Models: Detailed descriptions of existing and implementations of standard solutions patterns.
- EA Portfolio Assessment Tool: Although used in all four of the framework areas, the portfolio assessment is especially useful in the TA. Objective data is plotted and jump-starts discussion and analysis (detailed on pages 23-24).





Technology decisions are also informed by our vendor partners. To this end, MDIT has created multiple venues for input. In addition to the traditional Request for Proposal route, vendors have an opportunity to introduce their product to the state of Michigan via the Horizon and Spotlight programs. The Horizon program provides access to executive leadership on a monthly basis. Suppliers whose products match state priorities may provide brief presentations to the leadership team. Through the Spotlight program, suppliers may provide in-depth demonstrations to executives and subject matter experts. These forums are productive, not only for the vendors who are interested in doing business with the state, but also for MDIT, which is interested in keeping up with market trends and offerings.

TA Assessment and Progress - Setting Product Standards

Standard setting is not a trivial task. The Office of Enterprise Architecture must consistently weigh the unique government requirements for open competition with the realities of staff skill sets, cost and pressure to lower state expenditures. Direct involvement from state agencies is facilitated through MDIT's executive steering committee, the Michigan Information Technology Executive Council (MITEC).

The entire process is designed to be inclusive, iterative and to balance the weight of ongoing support requirements with the rapid pace of technology innovation. The Technical Architecture areas of focus are driven by the needs highlighted in the other framework areas, as well as the need to address emerging technologies that the state will likely adopt.

Product standards developed in the TA include guidelines for installation, configuration (specific versions) and parameters. This detailed information augments and drives the reference models—describing how specific products can be combined to deliver a solution—from the Solutions Architecture. The formal process for developing product standards is detailed on pages 27-29. Some of the key standards developed this year include:

Open Source Products

- Statewide Office Automation (Directory Services, Desktop management, Desktop OS, File Share, etc.)
- Hosting Centers (facilities, installation and configuration of equipment)
- Voice over IP (VoIP)
- Wireless LAN and Communication

Technical Architecture in Practice...

The systems being replaced at the Department of Human Services are on four distinct platforms – two different Mainframes and two different server operating systems. The technology has aged well beyond its useful life expectancy and support staff struggle to meet client expectations.

As part of the development process for the new eligibility system, the IT staff works with EA to ensure only standard products specified in the Technical Architecture are used in the new system.

The products selected are common platforms, already supported by the state of Michigan, the software used on the servers is up to date, standards-based and the system as a whole is readily supported by existing staff.

MDIT staff, outside of the current support team, are knowledgeable about the use and implementation of every product used in the construction of the new system. This ensures a smooth succession plan as employees retire or move on to other duties. Familiarity with the technology cuts installation times in half and volume purchasing discounts significantly lower the ongoing hardware and software costs.

Using a strong TA puts less strain on long-term budgets and IT executives can consolidate the skills required to support the eligibility business functions, improving quality and overall responsiveness.

TA Assessment and Progress - Mapping a Product's Lifecycle

By analyzing industry trends and defining best practices around the use of technology, Technical Architecture maintains and develops technology lifecycle roadmaps. These roadmaps drive adoption and regulation of IT. Information on technical products is gathered from supporting vendors, and strategies for their actual use within the state are planned on a four-year horizon. The roadmaps classify each technology by explicit version or release. EA, working with technology subject matter experts (specialists), manages the identification, classification, and strategic direction of the use of specific technology at the state. EA conducts semi-annual updates to our technology lifecycle roadmaps based on industry changes and technology adoption and implementation. More detail on this work is available in EA-Appendix D.

Objectives and Targets

Following are Michigan's Technical Architecture objectives and targets:

- Enhance processes to drive planning and budgeting for technology governance (2008)
- 80% of solutions designed/implemented according to approved reference models (2009)
- 70% of all solutions administered and managed according to approved operational policies and standards. (2009)
- MDIT will continue to remove redundant or outdated technologies from the technical environment (Ongoing)
- Through virtualization, achieve zero annual growth in total physical number of servers under management (2010)
- Through virtualization, achieve double the average CPU utilizations for managed servers (2010)
- More than half of solutions rely on unsupported products; versions will be migrated to approved, standard platforms (2011)

More details, including a template for our lifecycle roadmaps, are available in EA-Appendix D.

Implementing Michigan's EA Framework

The concepts of Michigan's EA framework are more than academic theory. Coupled with a comprehensive planning process they coordinate and drive technology activity for our state.

The following section outlines the structure and methods used that turn our framework into actionable initiatives. A work plan and resource commitments ensure that progress is made. Critical processes and tools ensure that EA is a sustainable effort that will transform our state through technology. Each element is discussed below.

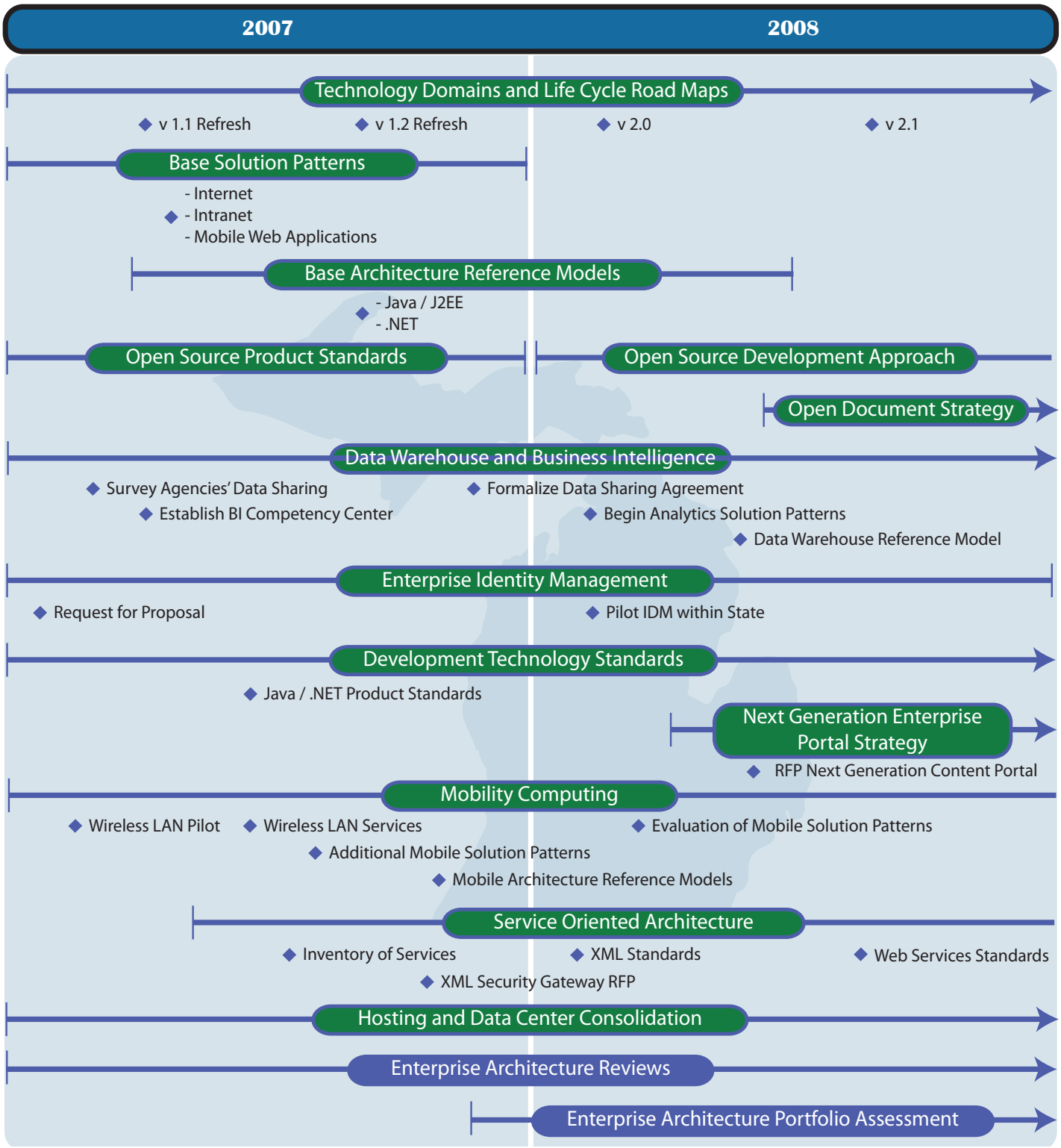
The EA Work Plan

The four disciplines allow Enterprise Architecture to first plan and then realize the vision for Michigan's technology future. This work plan is derived from the planning efforts in the PSA and represents a portfolio of initiatives grounded in true business priorities.

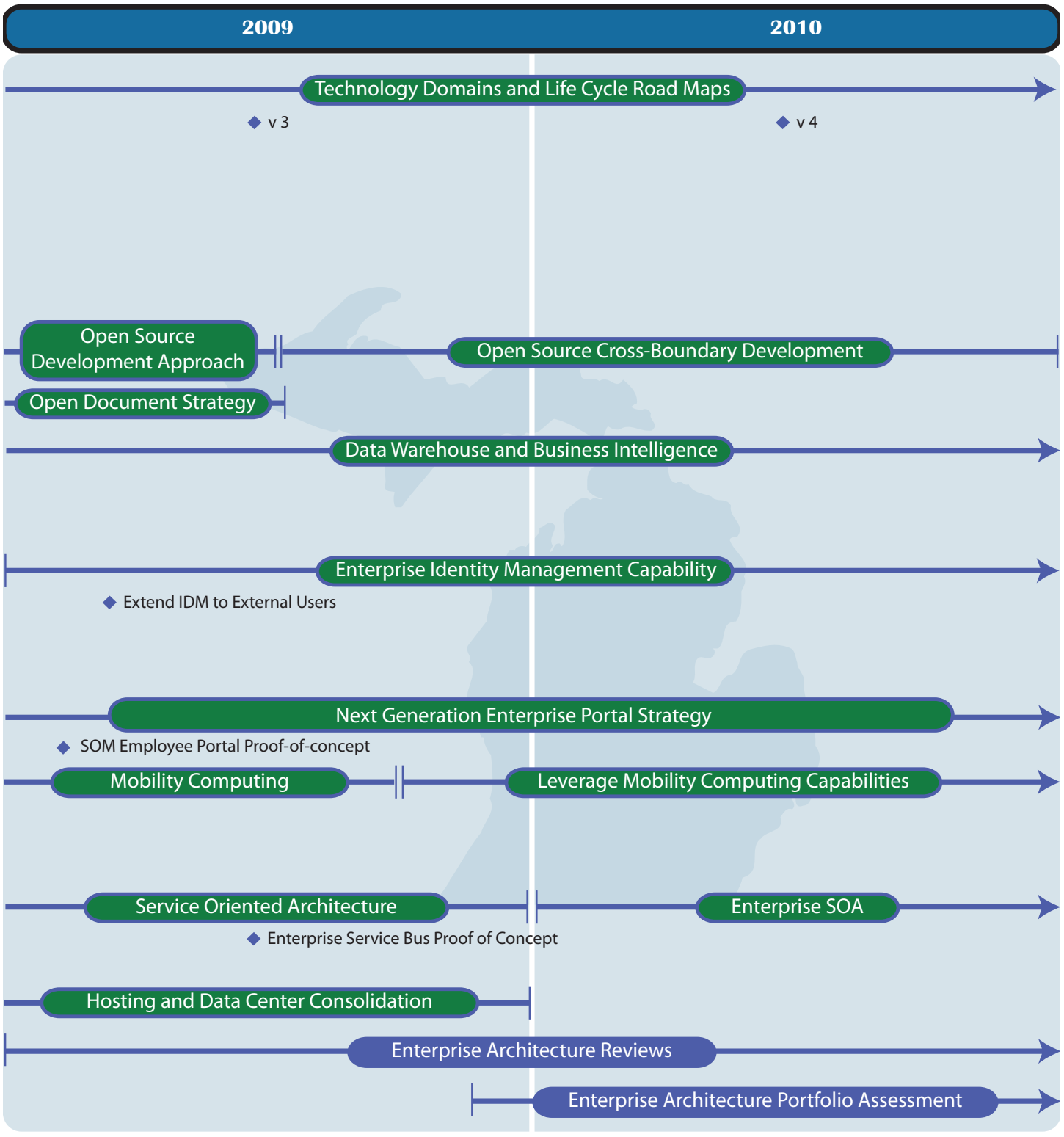
The work plan is approved by MDIT executive management and our client-based steering committee (Michigan Information Technology Executive Council). Progress is monitored every week for deliverables and issue resolution.

The Office of Enterprise Architecture plan's efforts focus on a multi-year horizon; beyond the current fiscal year. The plan is updated as needed to reflect changing businesses needs, budgetary fluctuations and the rapid pace of technology innovation. MDIT's EA work plan for 2007-2010 is presented on the pages that follow.

Implementing Michigan's EA Framework



The 2007-2010 Work Plan



Resource Commitments and Governance

Team Charter

At the center of EA activity is the EA Core Team. The Office of Enterprise Architecture facilitates this cross-departmental team of MDIT technical leaders and specialists. The team includes appointed staff from all facets of the MDIT organization: Contracts and Procurement, Enterprise Security, Office Automation Services, Telecommunications, Data Center Services and each software development group serving the state agencies.

The Enterprise Architecture Core Team has the authority to oversee the assessment, adoption and use of technology at the state of Michigan. They establish and utilize processes and procedures to assess technology needs across the four EA framework areas. The architects that make up the EA Core Team have several roles:

- Oversee and advise MDIT architecture workgroups and standards development teams
- Work with MDIT Contract Office to establish the criteria for technology bids
- Develop processes for information dissemination and communication
- Maintain and oversee the processes to select, review, evaluate, approve or deny and prioritize Enterprise Architecture, to include IT standards, policies, strategies, architectures and guidelines
- Conduct technical process engineering
- Perform EA portfolio analysis
- Oversee technology exception reviews
- Review and evaluate vendor proposals

Figure 3 – The EA core team is a combination of roles that pull together the technology leadership across the MDIT organization.

Authority

Decisions of the EA Core Team are binding for the MDIT Organization, but are subject to review and approval by MDIT executive management. Appeals for the EA Core Team's technical decisions are sent to the Executive Technology Review Board, including:

- Deputy Director of Infrastructure Services, MDIT
- Information Officer (Appointed by Agency Services Deputy Director, MDIT)
- Chief Information Security Officer
- Director, Telecommunications, MDIT
- Director of Office Automation, MDIT

The EA Core Team is empowered to appoint persons for architecture workgroups to do technology assessments and adoption planning, standards development teams, vendor briefings and establish processes, as necessary, to enable the EA Core Team to carry out its responsibilities.

Portfolio Assessment

Making EA decisions and prioritizing the EA agenda is a constant challenge. Michigan's EA framework is designed to be pragmatic and flexible, spending resources where they do the most good. This more flexible approach means that even with the high-level priorities defined in the Public Service Architecture, EA must have the ability to quickly assess our portfolio of initiatives, projects and tools in each of the four areas of the EA framework.

Every day the Office of Enterprise Architecture is faced with difficult technical and project priority decisions that have a broad impact on our state.

The EA Portfolio Assessment Model is the premier tool used to assess activities in any

of four EA areas. Whether evaluating a new public service offering, an exciting data collaboration project or evaluating the state's desktop tools, this model takes a hard look at objective factors and jump-starts the decision-making process.

This simple model assesses any activity in the EA portfolio across two dimensions:

- The first dimension quantifies the utility the initiative or technology has by determining the level of adoption across state agencies, its overall visibility and intrinsic business value.
- The second dimension is defined as level of maturity, which is measured by scoring a solution for compliance with defined standards, our ability to maintain it, its scalability and whether its implementation currently follows best practices.

Quadrant 1 – Underutilized Solutions

Solutions which cluster near quadrant 1 are highly mature but still have relatively low utility across the enterprise. This practice, technology or activity is a great target for aggregation and consistent, coordinated management. These types of initiatives or products represent areas where cross-boundary implementations and cost savings can likely be achieved by establishing a "center of excellence" that leverages resources in the most efficient manner possible.

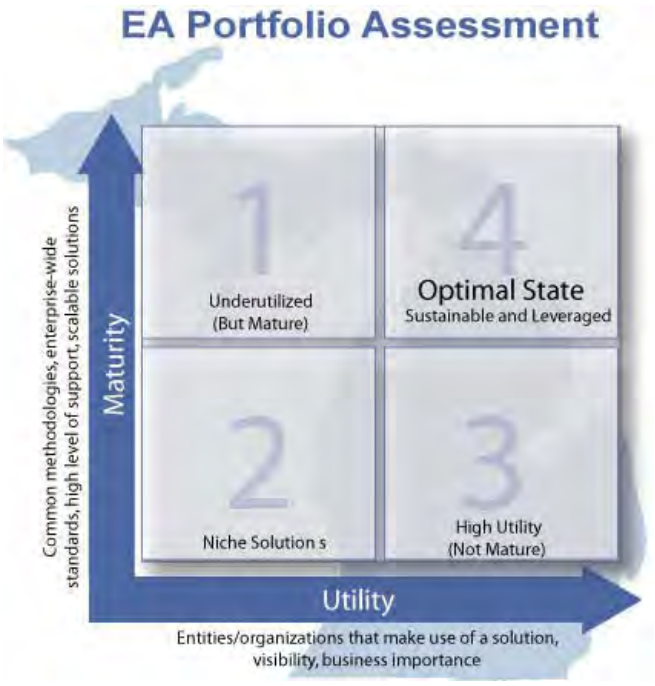


Figure 4 – The EA Portfolio Assesment Model: Each EA initiative under consideration or technology decision is evaluated on two key dimensions.

Portfolio Assessment (Cont.)

Quadrant 2 – Niche Solutions

Solutions and activities which cluster near quadrant 2 do not demonstrate a high degree of maturity, although they are likely mature enough to be considered sustainable given their limited installation and use. Unless overall business requirements change to raise their importance to the enterprise, these solutions typically do not merit resource investment as the statewide impact of EA investments would be minimal.

Quadrant 3 – High Utility Solutions Lacking Maturity

Solutions which cluster near quadrant 3 have high utility but low maturity. These activities are likely surrounding critical legacy systems developed and implemented before Michigan's IT consolidation. Examples include disparate call centers, ERP systems and permitting systems to name a few. When critical functions are implemented with a wide variance of technical solutions the enterprise can be exposed to significant risks, unsustainable levels of staff commitment and unnecessary financial exposure. When these systems are at the point of investment (typically a rewrite or major upgrade), EA works to justify the investment in standardization, process improvement and stabilization to move the entire enterprise to a single solution.

Quadrant 4 - Optimal State (Enterprise Solutions)

Solutions which cluster near quadrant 4 should be held up as examples to the enterprise. Where possible, Enterprise Architecture drives adoption of the standards/methodologies employed by their design, development and support teams across the entire IT organization. This dissemination of best practices encourages collaboration among technical teams and is an important area of focus for the Office of Enterprise Architecture.

Portfolio Analysis Tool

The Portfolio analysis tool is used to align the entire EA portfolio, but has benefit in each of the four framework areas. Some examples of how this tool is used are listed below:

Public Service Architecture: Portfolio/process prioritization and resource allocation.

Solutions Architecture: Evaluating technical solution alternatives.

Information Architecture: Analysis/prioritization of data sharing and business intelligence initiatives.

Technical Architecture: Technology product comparisons, reviews, and prioritization of standards efforts.

Moving to Optimal

In the world of technology, optimal is golden - optimal usage, optimal performance, optimal cost effectiveness. It is therefore the goal of any EA activity to move Michigan toward optimal IT performance, as reflected in figure 5. Each activity, initiative or technical solution falls into a particular realm of IT evolution or "quadrant," depending on the present state of that activity. To reach the optimal (Quadrant 4), different strategies are necessary.

Solutions that fall into Quadrant 1 are recognized as mature within the state but underutilized. EA works with the primary owners of these solutions, determining how to make them broadly available for use, thereby avoiding the costly and unsupportable problem of creating multiple solutions for the same business problem. In other words, EA provides a means for enterprise-wide solutions so we avoid recreating the wheel from agency to agency.

The primary EA activity for Quadrant 1 solutions is to determine ways to leverage existing, robust and supportable platforms across the state, and enterprise-wide centers of excellence are one approach in active use. An example of EA at its finest, is the approach being followed for the Citrix Meta Frame architecture. MDIT established an enterprise-wide center of excellence based on the work done to provide a robust and stable implementation of Citrix for one state agency. Projects that have a similar demand for a Citrix solution are directed to the center of excellence to utilize the skills and experience of the supporting staff for this mature approach for implementing Citrix.

Quadrant 2 activities are unlikely to warrant additional allocations of limited resources. Activities in this quadrant merit investment in improving their maturity only if utilization is expected to increase enough to represent a substantial improvement in business value.

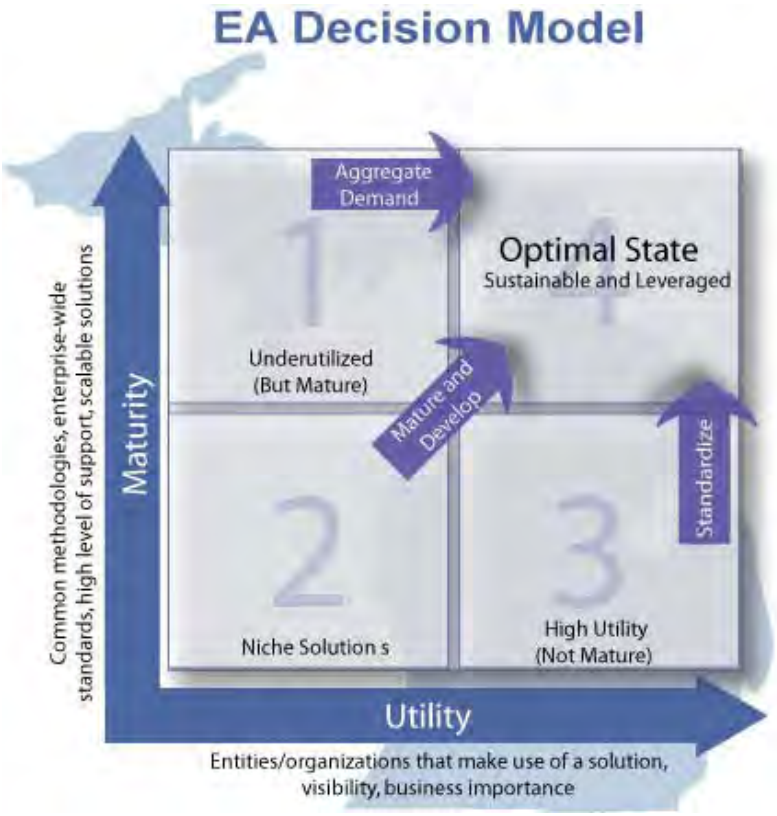


Figure 5 – Moving the Enterprise to "Optimal" can require a different approach for each quadrant.

Moving to Optimal (Cont.)

Solutions that fall into Quadrant 3 are recognized as opportunities for standardization and migration to better-supported technologies. Solutions in this quadrant are heavily used but may represent aging technologies, one-off solutions or systems which are brittle and difficult to support.

Such a scenario is identity and access management (IDM) wherein several applications throughout the state have non-standard approaches for identity management. This includes custom-made solutions for storing usernames and passwords, custom extensions of commercial products and non-standard deployments of technology product stacks. At the time these applications were developed, there were no broad standards for IDM or application delivery. Recently, the EA team spearheaded an RFP for an enterprise identity and access management system, including an application portal for the proposed solution. By developing a common approach to IDM, the EA team will provide a means for resolution that affords improved standardization and supportability. The IDM solution and the accompanying portal are a clear example of moving solutions from quadrant 3 toward quadrant 4.

EA has prioritized evaluation of heavily-used technology solutions to develop and implement standard architectures. The EA standards development process, detailed in the next section of this document, is being followed to mature and manage a standard set of technologies. Architecture reference models with product stacks reinforce the proper use of the standard set of technologies. EA solution assessments are the means through which project teams are directed to use standard technologies and reference models.

Standards Development Process

The process of technology adoption and governance is driven along a defined path by the MDIT's Office of Enterprise Architecture (OEA). One of Enterprise Architecture's roles is to deliver direction and guide decisions on the evaluation, adoption and implementation of technologies across state government. An active role in selection and adoption of new technology is important, but guiding the planning and migration from aged and expired technology is also critical to serving the business needs of our client agencies. Through this process we've adopted the phrase "controlled innovation."

Working hand-in-hand with our Agency Services teams, EA governs the method of introducing technology, assessing total cost of ownership, mitigating risk and moderating the pace of change. A careful balance is needed here: unchecked acceptance of technologies results in too many solutions, a diluted IT talent pool and a challenge in the ability to leverage solutions across agencies and the enterprise. Lock-down restrictions, or limiting technology adoption, limits the services and benefits we can deliver to our citizens. Controlled innovation allows us to balance the advancements that occur in the technology industry with an organized, business-oriented technology planning and governance effort.

To keep abreast of new technologies and their potential use and benefit to the state, MDIT has formal programs and methods to review new technology solutions. MDIT Horizon and Spotlight programs (see "Horizon Program" at **www.michigan.gov/dit**) offer our decision makers opportunities to review technology vendor solutions on a monthly basis. Critical input and research is also provided by industry analyst organizations, including Gartner, Forrester, and Norex. Finally, our decisions are also guided by best practices from state and national technology communities such as the National Association of State Chief Information Officers (NASCIO). Vendors also have an opportunity to submit their technology solutions through the procurement process in response to a state Request for Information (RFI) and/or Request for Proposal (RFP). Still other technologies enter into use through state and federal policies and programs.

To organize and plan for all of the upcoming and outgoing technology solutions, the state of Michigan utilizes technology lifecycle roadmaps (see EA-Appendix D).

A Focus on Standards

Standards and their enforcement are the backbone of Michigan's approach to meeting many of its strategic goals and objectives. As such, this process plays a major role in the state's technical architecture. Standards are defined and documented at several levels throughout the Enterprise Architecture process. There are two chief types of standards within this process:

Standard Solution Patterns

Standard solution patterns are concerned with the overall requirements of a given technology domain or process. These standards define what a technology should accomplish, its integration requirements, environmental limitations and business issues it must resolve.

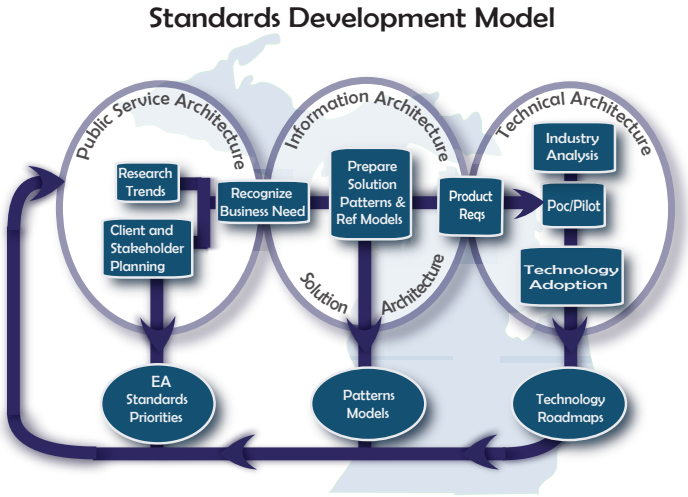


Figure 6 – Enterprise Architecture is fully integrated with the State's common engineering philosophy. It offers many benefits from a quality assurance perspective as well as a qualitative perspective.

Reference Models and Product Standards

Reference models and product standards deal with specific technology product selections. Including preferred version numbers, engineering and configuration specifications and support model definitions. The standards process was created to maintain consistency from the initial recognition of a business need to the ultimate selection of technical solution and vendor. For this reason, MDIT's standards development model overlaps areas within Enterprise Architecture and acts as a consistent oversight check and balance to ensure products meet needs.

Once a business need is recognized, the standards development team prepares the relevant solution pattern. This process consists of requirements gathering sessions involving a cross-functional team of staff from client departments, interested parties and the Office of Enterprise Architecture staff. Once the appropriate solution pattern has been built, the team analyzes whether a reference model can be built from existing product standards. If not, then research and proof of concepts are performed with careful effort to keep the research and development focused on the key criteria of a successful technical solution.

During the proof of concept (POC), the solution pattern and potential reference models are reviewed and questioned for their return on investment potential, viability given the capabilities of alternative solutions and migration challenges faced by particular departments. Additional industry information and analysis are also utilized in the POC/Pilot to support the team assessment and planning efforts. The information gathered is used during a product selection and procurement phase. Once the solution is available to the state, a formal pilot of the technology is conducted. This pilot identifies the optimal configuration, engineering issues and support models of the technology, in addition to any other associated best practices.

These items are documented and become part of the product standard for that given technology and its use. In many situations, as described above, MDIT teams make decisions on the introduction of new technologies and the retention or replacement of existing technology solutions. The entire process is iterative and responsive to the changing technical environment.

Systems Development Lifecycle

In 2005 Michigan began development of common, unified systems development lifecycle termed Systems Engineering Methodology (SEM). The state's SEM has been developed to fully enable Michigan's EA processes.

Mandatory Checkpoints

There are two mandatory checkpoints or reviews throughout the SEM lifecycle. Once, before construction of any new application system begins and, another, before it can be promoted into formal production.

This oversight ensures that standards are followed throughout the process and that needed changes in earlier design specifications are reviewed before technology is widely used. As an integral part of the SEM, the EA team developed a formal process of solutions reviews in 2006. These reviews use a standard approach and an easy-to-use questionnaire to capture the high-level design, integration approaches and technologies used for existing or pending solutions.

From this information, the Office of Enterprise Architecture can intervene to standardize the technologies and processes used. The Solution Review process also opens communication between teams where knowledge can be shared between projects engaged in similar development and implementation tasks. Moreover, this assessment points out exceptions and other anomalies in proposed solutions.

EA Services

Throughout the state's SEM, the Office of Enterprise Architecture offers assistance and support. Each stage of the SEM is mandated for development groups. By using this approach, OEA provides assistance with the following:

- Analysis of alternatives
- Functional design
- Technical design
- Communication of technical requirements to appropriate MDIT enterprise teams

The EA Core Team participates in requests for proposals, develops technical specifications, aligns technical initiatives to statewide business needs and translates technical designs into requirements for infrastructure, security and other service teams within MDIT. The main goals of EA's elective services are to propagate best practices and encourage collaboration among all MDIT technical organizations.

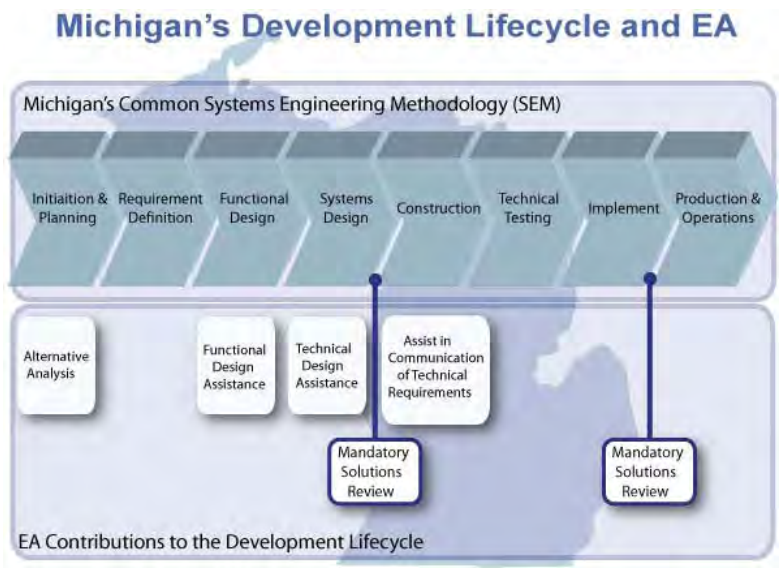


Figure 7 – Enterprise Architecture is fully integrated with the State's common engineering philosophy. It offers many benefits from a quality assurance perspective as well as a qualitative perspective.

EA Repository

In each of the four framework areas there are key documents, deliverables and information that guide EA activities. The direction of technology initiatives must be communicated and available for ongoing use by all MDIT employees. These tools are core to the success of EA in Michigan and act as an institutional EA knowledge base. The following items are representative of what is included in this repository of information:

EA Work Plan

This provides a high-level view of the EA team's initiatives and milestones developed through EA analysis and prioritization. This work plan includes a conceptual presentation of Michigan's future-state architecture. The conceptual architecture is intended to provide a summary view of the solutions, services and technology elements targeted for action, with the aim of building a more consistent and integrated environment demanded by state business drivers.

Solution Patterns

Patterns are developed to aid teams in the design of an initial solution. A solution pattern provides a structure that supports a design idea that can be reused and leveraged across the enterprise, blueprints that identify components at a design or logical level (for example, a data server or an application server) and show the roles, interactions and relationships of components at that level. Initial Architecture Solution Patterns are included in EA-Appendix C.

Reference Models

Reference models are a more detailed representation of specific technology used in the implementation of a solution pattern. They include best practices, standards, development techniques and code samples. They are designed to be continually developed and refined.

Technical Lifecycle Roadmaps

Roadmaps are used to identify and categorize products within our Technical Architecture (TA). Vendor lifecycles are also identified. Roadmaps are used to inform project teams reviewing possible solutions and during implementation planning. They provide guidance to plan for technology governance (EA-Appendix D).

Technology and Standards Policies

The policies are established to provide overall guidance in the selection and use of technology products at the state. Standards describe the specific products that have been identified as acceptable to meet the goals of the policy. MDIT Technology Policies and Standards can be found at www.michigan.gov/dit and by selecting the "Policy and Standards" link. Specific versions of products will be outlined in the product lifecycle roadmaps as detailed in EA-Appendix D.

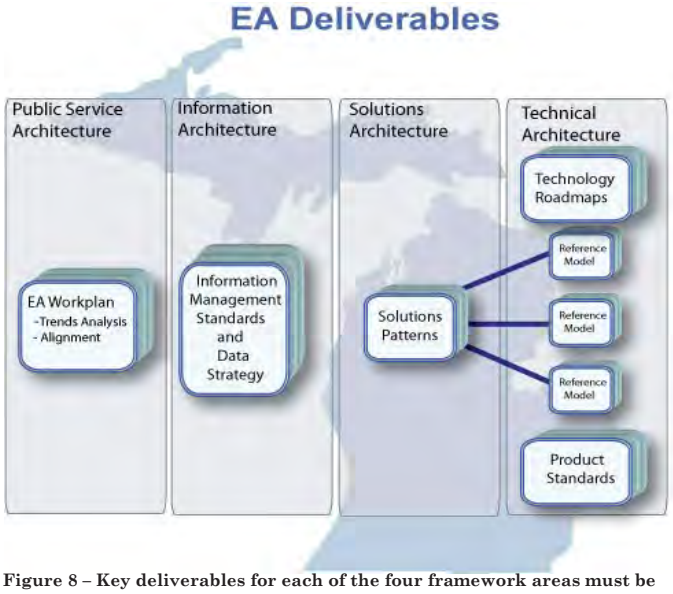


Figure 8 – Key deliverables for each of the four framework areas must be readily accessible to the entire MDIT organization for EA to succeed.

Solution Development

Rapid development of solutions with the EA framework centers around the use of two key outputs; solution patterns and reference models. The process of using patterns and models structures the way MDIT builds reuse into the technical design stage of the SEM. Our goal is to build for reuse from the onset. This very simple process follows three steps:

1. Match requirements to existing patterns
2. Determine if existing reference models will enable requirements (usually multiple options)
3. Evaluate reference models and select the most cost-effective package

At any stage in the solutions development process new solution patterns and reference models can be introduced into the Solutions or Technical Architectures. Additions are approved by the EA Core Team.

Solution Development Process in Practice

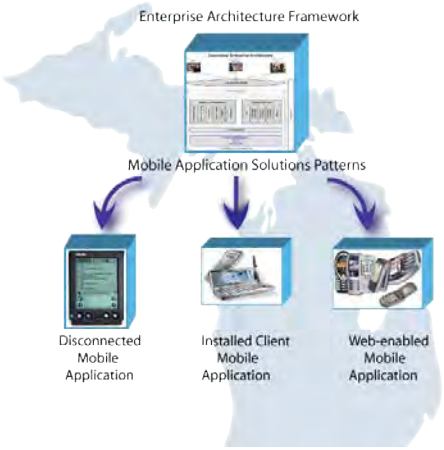


Figure 9 – Solution patterns outline high-level configurations, but stop short of providing any product details.

The Department of Natural Resources (DNR) is looking for ways they can enable better recreational fishing licensing. Working with their MDIT Development team and the EA Core Team, they evaluate the available solution patterns to determine what pattern best fits their project requirements. During the process of reviewing the available solution patterns (see Figure 7), the project team reviews key information including the basic logic architecture each pattern provides; prerequisites to using each pattern; the base components of each pattern; its strengths and weaknesses; and when other agencies have implemented a similar pattern(s).

In this example, the DNR has expressed that they want to provide the capability for Michigan citizens and visitors to Michigan to be able to order a fishing license online through the Internet. Many of the state campgrounds provide Internet access but for those fishermen that don't bring their computers, the DNR has an additional requirement to also enable licensing through mobile devices that can access the Internet.

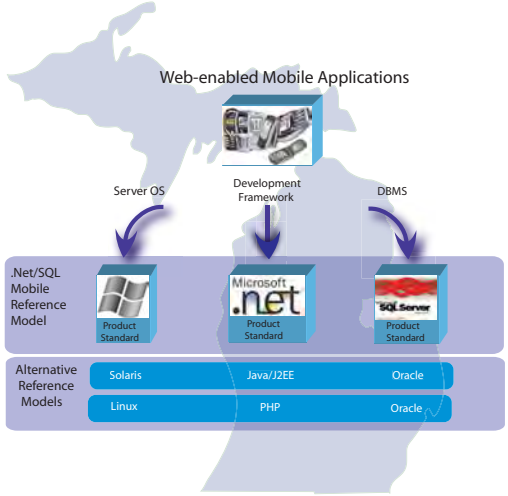


Figure 10 – Reference models combine standard products into preferred "technology stacks" that can be used to implement systems.

From these requirements, one of the solution patterns reviewed is a great match. The Web-enabled Mobile Application Solution Pattern is chosen for the high level design. Figure 8 depicts the dissection of this pattern into its associated Reference Models from the TA framework (simplified). The reference models are available as proven technology "stacks" that projects can leverage.

TA Reference Models will provide enough detail for the project to begin, including: standards for the technology stack specific to the solution pattern, best practices, and mentors within MDIT. The project team chooses to implement their new license renewal system using a combination of Windows, .NET application development tools and the SQL Server database. The DNR technical teams are familiar with the technology outlined within this reference model and utilize this familiarity to ensure success.

Where Are We Headed?

The practice of Enterprise Architecture, particularly Public Service Architecture, can transform government. As EA moves forward, it is playing a key role defining, driving and delivering positive change. In the simplest terms, the future of EA is innovation that supports new and improved business processes for a variety of public service offerings, increasing government service and performance value to the citizen. In their recent publication, "Transforming Government through Change Management: The Role of the State CIO," NASCIO calls this level of effectiveness government transformation: "Reform is an attempt to go down the same path more efficiently, transformation involves the development of entirely new paths."

In Michigan and across the globe, IT is beginning to forge entirely new paths. One of the earliest and most visible manifestations of a transformational EA has been integrated service from collective government entities, such as in Canada's BizPal. From a longer-term perspective, EA-enabled transformation may also involve using information, communications and technology to transform government goals and desired outcomes, including governance, citizen participation and collaborative relationships.

Several jurisdictions, including Canada (Government of Canada Strategic Reference Model), UK (Transformational Government Implementation Plan) and the U.S. (Federal Enterprise Architecture) have taken steps in developing a transformational role for EA. These approaches are sufficiently flexible that a variety of priority areas can be targeted, ranging from stakeholder needs, such as health, education and economic development; to processes such as revenue collection, business licensing; to organizational silos, like shared administrative services.

Michigan has recognized and is acting upon its EA transformational capabilities and opportunities. Cross-boundary goals and strategies are included in Michigan's IT Strategic Plan. MDIT's Office of Technology Partnerships is facilitating statewide formal cross-boundary initiatives that include public, non-profit and private sectors.

The cross-boundary development process has spawned a number of partnerships in areas including health IT, land use, shared services and state/local infrastructure integration to name a few. These transformational goals and initiatives formalize Michigan's shift from a focus on agency-based efficiencies to a focus on the full range of possibilities that can drive statewide transformation.

Integrating EA and Cross-boundary

Benefiting from research with Gartner, Forrester and the Harvard Policy Group on Network-Enabled Services and Government, Michigan's EA team has identified three major steps necessary to fully integrate a cross-boundary Enterprise Architecture.

Step One: Implementing Change Management

Any truly effective government transformation will require vision, leadership and ultimately a commitment to change from all stakeholders involved. Being jointly established with the MDIT Strategic Management Team and other stakeholders, the change management process and framework in Michigan will be critical to organizing and focusing transformational efforts.

Step Two: Developing a Cross-Boundary EA Framework

The cross-boundary framework builds upon Michigan's planning, change management, innovation and transformation practices. This framework must accommodate increasing complexity as Michigan's cross-boundary maturity level progresses from exchanging data, to conducting transactions, to sharing services as well as other resources and capabilities.

Critical framework elements include:

- Strategies and policies: Identifying and developing appropriate governance structures for sector, tier and service relationships
- Stakeholders and potential partners: Identifying and understanding when communities of practice are ready for cross-boundary transformation
- Processes: Identifying current and potential common or shared business processes
- Resources: Developing principles and guidelines on allocating and sharing costs
- Technologies and solutions: Conducting assessments and keeping up with what is possible and available

Step Three: Develop Explicit Objectives and Next Steps

As detailed on the following page, there are some specific cross-boundary objectives and opportunities for advancement in each of the four EA disciplines. This work will be necessary in order to fully-realize an architecture that reaches across boundaries and maximizes the benefits of IT collaboration.

Objectives and Next Steps

A cross-boundary EA approach has specific implications and deliverables in each of the discipline areas. The following are goals, targets and actions for 2008-2010.

Public Service Architecture

- Identify and assess drivers, disruptive trends, changes in business processes, solutions and technologies that represent opportunities and barriers for the role of EA in cross-boundary solutions and services
- Develop a cross-boundary framework including a targeted business process and public service areas where processes, infrastructure and services can be shared

Information Architecture

- Develop an information exchange, transaction and sharing standard framework for inter-governmental and public/private sector initiatives, including shared services and infrastructure

Solution Architecture

- Develop a portfolio of potential solution scenarios (options) and solution patterns in priority areas such as health, education, economic development and the environment

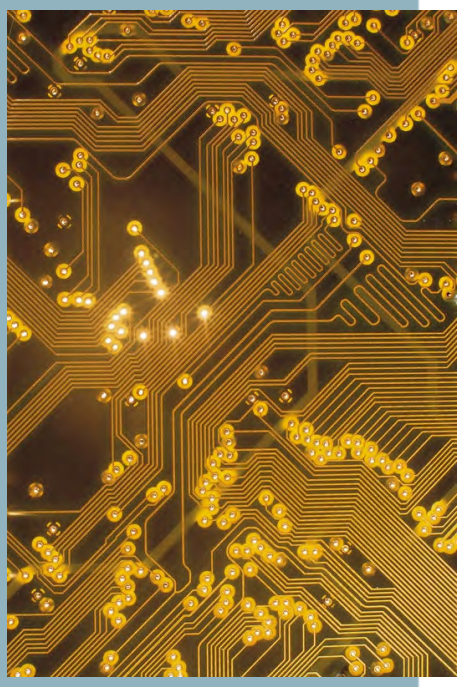
Technical Architecture

- Identify and assess mature or maturing solutions and technologies, and solutions with transformational or high-performance potential, that are suitable for connecting tiers of government, public and private sectors or improving performance and customer service.
- Potential areas for review include:

  Government Tiers: service-oriented architecture, enterprise information management, federated identity management, business process management, extensible markup languages, packaged enterprise resource planning (ERP), open source business applications and vertical applications

  Public and Private Sectors: Web service-enabled business models, public semantic Webs and security and privacy solutions

  Improved Performance and Customer Service: packaged customer relationship management (CRM), content management, location aware applications, and Voice over Internet Protocol (VoIP)



EA Maturity in Michigan

Enterprise architecture is in constant motion. It is a project that never ends. The rapid pace of technology ensures that change will be an ongoing companion for our technical organizations. A strong EA program keeps state government from being held back by technology limitations and sets a stage where true transformation is possible.

We have laid the foundation for Enterprise Architecture in Michigan. Understanding and aligning our EA approach with state priorities was a crucial (and not altogether painless) effort. From this exercise, we have identified our state's core long-term technology needs and have outlined the tactical efforts needed to begin to address tomorrow's needs today.

Michigan's Department of Information Technology is committed to building upon the successes of the past and to looking forward to broad utilization of common technology solutions across our departments and local governments. With a disciplined focus and continued empowerment of technical staff, our EA effort will continue to benefit the state for years to come and ensure that MDIT delivers maximum value for every dollar we spend and build solutions that matter.

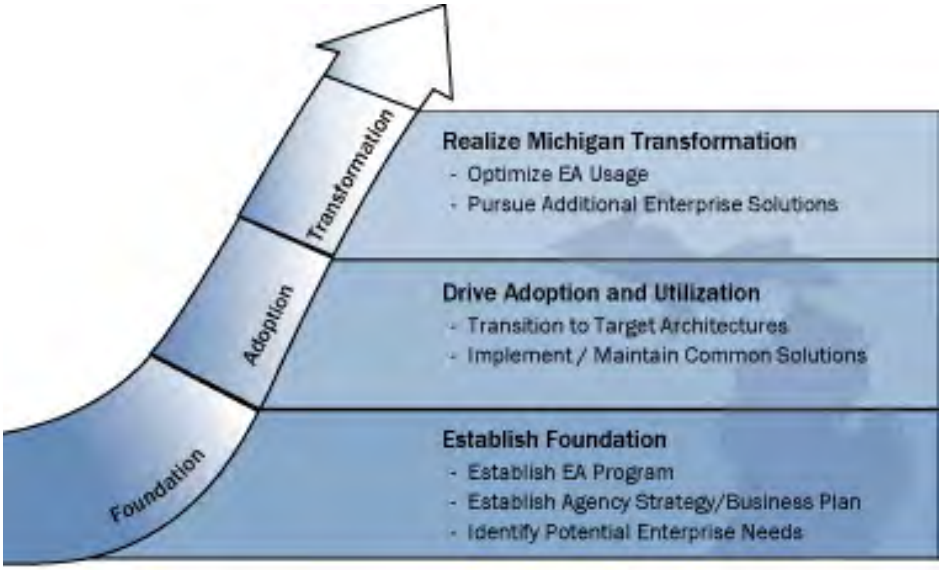


Figure 11. Adapted from a maturity model developed by the Federal Enterprise Architecture Program Management Office

Cyber Security

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Additional appendices referenced in the Cyber Security plan are available upon request

I Cyber Security

Dan Lohrmann
Director, MDIT Office of Enterprise Security, State of Michigan CISO

An "all hazards" approach is helping us effectively manage emergencies and keep the business of state government—critical IT services to Michigan citizens—running smoothly.

Vision of Action

The Cyber Security Strategic Plan began with an in-depth review of our systems and procedures, involving a wide cross-section of Michigan's state government. To ensure we were meeting business needs, we spoke first with our customers, beginning with state agency senior executives. We were able to include perspectives of the business, technical and executive-leadership to develop state-of-the-art, customer-focused solutions. We also benefited from external analysis of our practices and opportunities for advancement.

The end product is something we can be proud of; it is something that will carry the work of the Michigan Department of Information Technology (MDIT) into the future. It will help us reach our vision of being a recognized leader in providing best-practice security solutions to protect the privacy and information of Michigan's citizens.

This document illustrates our philosophy for the future, which is centered on risk reduction, business continuity, training and culture and a commitment to excellence. We are proactively protecting networks and communication as well as the data that have been entrusted to us. We are accomplishing this through deployment of technology to our agency clients and developing partnerships with the larger security community, including federal, state and local experts and stakeholders.

Our vision of action will ensure that we can effectively handle recovery from all types of disasters. An "all hazards" approach is helping us effectively manage emergencies and keep the business of state government—critical IT services to Michigan citizens—running smoothly. Finally, we are equipping state employees with training and a solid understanding of their roles and responsibilities in protecting citizen information and maintaining the highest ethical standards.

As we look forward, we realize that change will continue to occur. Our security approach enables us to adapt to changes in the risk environment. To this end, we are developing new policies and procedures, including a template for state agencies to use in developing security plans. We invite you to join us on this important journey into the future of enterprise security.

Guiding Principles

Our vision of being recognized leaders in providing best-practice security solutions is central to everyday operations of the Office of Enterprise Security (OES). Together with our partners, we are working to ensure the confidentiality, integrity and availability of State of Michigan information assets. Security awareness is a vital piece of this work.

Our paramount and daily mission is to successfully carry out security operations and oversight in concert with our Michigan Department of Information Technology (MDIT) partner divisions and offices in order to maintain the highest achievable levels of protection of all data resources and reduce the overall threats to critical computer, technology and communications services.

As security headquarters, we provide information technology security services and timely advice to our client agencies. We act as diplomats to promote and maintain high levels of security consciousness throughout Michigan government. When circumstances require, we provide and assemble teams of specialists to respond to leading security issues or concerns.

Most importantly, we work diligently to keep Michigan's enterprise and agency networks, communications systems, computers, data and technology resources safe and secure from all known and predictable threats in an environment promoting ease of access and use.

OES combines our efforts with those of counterparts within MDIT and agencies across state government to instill and maintain the confidence and trust of staff, client agencies and citizens. Whenever opportunities exist, we act to position Michigan as a

Collaboration as the Centerpiece

Protecting Michigan's critical government information has become an ongoing, global challenge. The reality of today's cyber threats is that attacks against our critical infrastructure do not require physical access to targets to inflict great harm. In fact, persons bent on destruction could potentially carry out harmful attacks from the comfort of their homes—anonymously and thousands of miles away.

In order to provide the privacy and security that citizens rightfully expect, MDIT has established public and private sector partnerships to assist us in achieving ongoing protections. These local and national partners help us ensure the continued availability of e-government services in a safe, secure manner. Virtually every function of Michigan government relies on our reliable network infrastructure, whether working with local governments in local communities or communicating with federal partners.

As we move forward in the implementation of this strategic security plan, partnerships will continue to grow and develop added value. Some examples of key partnerships:

- Multi-State Information Sharing & Analysis Center (MS-ISAC): Working with our counterparts in the other 49 states and Washington, D.C., this organization provides real-time information on threats, vulnerabilities and remediation strategies to cyber incidents. The US-CERT Web site provides a wealth of information regarding cyber security from a variety of perspectives.
- Michigan Information Sharing & Analysis Center (MI-ISAC): Established in November 2006, this new organization is led by the Office of Enterprise Security and the Michigan chief information security officer (CISO). Rolling out the benefits of the MS-ISAC to Michigan local governments, this two-way communication provides essential coordination for cyber emergencies and coordination during virus attacks and other serious cyber situations. We envision this group growing from approximately 30 members to several hundred members over the next several years – thus providing a valuable resource to local partners.
- National Association of State Chief Information Officers (NASCIO) Security & Privacy Committees: This group coordinates public policy and develops research documents in coordination with states and the federal government.
- Federal Department of Homeland Security (DHS) committees & programs: NASCIO is represented on the Information Technology Government Coordinating Council (GCC) in Washington, D.C., by the Michigan CISO. Through jointly developing documents like the National Infrastructure Protection Plan's IT Sector Plan, a roadmap has been established to protect our nation's critical infrastructure in all sectors – including cyber. This document provides an essential list of future activities and this relationship continues to lead to new grants, programs and opportunities to protect Michigan families.
- Michigan InfraGard: A close-working relationship with the private sector is essential to improving the state's ongoing cyber security efforts. During 2004-2006, MDIT staff has participated in many InfraGard programs, conferences and outreach to schools. Additional activities are planned in the coming years.
- Universities, K-12 Education & Other Non-Profit Groups: We work with these groups to improve education and cyber ethics across Michigan.
- Pandemic Influenza Coordinating Committee (PICC): MDIT is actively involved in all aspects of Michigan's Pandemic Influenza Coordinating Committee (PICC). Working with public and private sector partners around the state and country, this committee is outlining technology's vital role in planning for affected emergency areas such as: transportation/ border, human health, animal health, public safety and individual/family/community.
- We are also addressing many new emergency management questions such as the need for telework during a pandemic emergency (www.michigan.gov/flu).

The Six's A's of Security

The six A's of Security are the lens through which we view processes, procedures, policies and services.

Administration: Development and publication of security policies, standards, procedures and guidelines, screening of personnel, security awareness training, monitoring of system activity and change control procedures.

Authentication: The process of identifying a subject or object, which can be checked and verified. It is usually differentiated between the authenticity of a message or file and the integrity of a transaction.

Audit: An independent examination of a work product or set of work products to assess compliance with specifications, standards, contractual agreements, integrity or other criteria.

Access Control: Protection of system resources against unauthorized access; a process by which use of system resources is regulated according to a security policy and is permitted by only authorized entities.

Assessment: The method of identification of risks and assessing possible damage that could be caused in order to identify appropriate security safeguards.

Authorization: The process of determining what types of activities are permitted. Usually, authorization is in the context of authentication. Once you have authenticated a user, the user may be authorized different types of access or activity.

I Cyber Security

Michigan Cyber Security

www.michigan.gov/cybersecurity

In order to continue educating the public regarding cyber threats, identity theft, and a host of other Internet problems, we have developed an award-winning Web site on cyber security.

The site is constantly updated and improved to provide relevant facts, figures, training and related information to protect all Michigan citizens. Whether individuals, businesses, schools or families go online, we want them to be safe.

Enterprise Information Security Framework

Protecting citizen information is a priority for Michigan and its 19 executive branch agencies. The enterprise information security approach is a cross-agency solution geared toward establishing a formal statewide framework for information security in Michigan.

Through this framework, we are developing policies, standards and procedures for agency use. With these guiding principles in hand, agencies are empowered to map out their own course of implementation in cooperation with MDIT. The results unify the security approach for state employees and business partners.

This statewide framing of security affords agencies the ability to effectively conduct day-to-day business, while allowing the state to expand business functionality in a safe and secure way.

There are a wide variety of security needs and services provided by state agencies. These needs and services must be handled while maintaining legal and regulatory compliance and protecting the state's information assets from deliberate loss or misuse. Mechanisms to allow agencies to transmit data securely across networks and store data securely while protecting citizen information are paramount.

Guiding this process is the fact that information is neither confined to computer systems nor to an electronic or machine-readable form. MDIT has long-recognized that security must apply to all aspects of safeguarding and protecting information or data, in many forms. Therefore, protecting this information, along with the processing and delivery capabilities of this information, is considered a key state asset.

Central to this framework is also the adoption of Control Objectives for Information and related Technology (CoBIT) concepts and National Institute of Standards and Technology (NIST) best practices. These objectives and best practices will complement agency internal policies, standards and procedures and provide agencies the ability to protect the state's sensitive information to the fullest extent possible. This enterprise approach to information security allows the state and its agencies to act in a highly coordinated and efficient manner.

Goals and Objectives

Our goal is to equip agencies so that they can effectively utilize:

- Mechanisms that protect the reputation of the state and allow the state to satisfy its legal and ethical responsibilities to protect sensitive information
- A statewide approach to information security
- Methods that make policies, standards and procedures easy to understand and access based on roles with the organization
- Mechanisms that help identify and prevent the compromise and the misuse of the state's data, applications, networks and computers

The first, and most important, underlying objective of the enterprise information security approach is the development of policies, standards and procedures to identify the state's security requirements. This will assist agencies in implementing the appropriate controls to protect sensitive information for which they are responsible.

Initiatives

The initiatives to be undertaken in this process are as follows:

- Developing statewide information technology policies (Ongoing): Currently, MDIT, with state agencies, is rewriting existing and developing new statewide information technology policies to address the state's management view on what will be secured and who will be responsible for securing it through the use of management, technical and operational controls.

- Next, standards will be developed to address, on a more granular level, how the management, technical and operational controls are to be implemented and what the expected outcome of any action should be.
- Developing statewide information technology procedures (Ongoing).
- Finally, procedures will be developed with detailed step-by-step instructions on how the standards are to be attained to reach the goals.

This enterprise information security approach supports the strategic view of the state and helps build its security foundation of protection, while the information technology policies, standards and procedures formulate a security framework of protection.

Enterprise Information Technology Framework			
Security Awareness Policy	Access Control Policy	Information Security Policy	Aditional Policies
• Acceptable Use • Security Awareness Training	• Authentication & Authorization • Separation of Duties • User Account Management	• Data Classification Encryption • Media Disposal & Sanitation • Incident Response	Complete listing at: connect.michigan.gov/MDIT
Standards			
Procedures			
Guidelines			

Agency Security Plan Development

This project synchronizes the state of Michigan's efforts to assist agencies with the creation of standardized, unified, but department-specific, security plans. The primary tool to be developed for use in this endeavor is the security plan template. It will include the recommended documentation and categories to assist an agency with identifying what information is required, data gathering, problem area identification, prioritization of next steps and the interfaces to other strategic security initiatives.

The agency security plan will identify all information technology assets within the agency, the risks to each of these assets and how much time, effort and money the agency needs to expend to thoroughly protect these assets.

The Office of Enterprise Security will be responsible for the creation of the security plan template. As the agency security plans are created they will be incorporated into an enterprise master security plan document held by Office of Enterprise Security.

Goals and Objectives

As this plan moves forward, it will be guided by the following goals and objectives:

- **Create standard, comprehensive security plans across all state agencies**
  To accomplish this goal, a standardized template will be created for use across all agencies. It will serve as a tool for documentation and analysis of the agency's current overall security status. In order to promote the use of best practices from NIST, CoBIT and the Center for Internet Security (CIS), those standards will be incorporated into the template.
- **Coordinate business-side & MDIT business continuity/disaster recovery plans**
  The focus here is to assess business-side plans for business priorities and requirements and how they would interface with MDIT disaster recovery plans to facilitate a coordinated effort for minimal customer service interruption.

- **Enhance security awareness**
  We are working to promote additional programs for employee security training and awareness. This training will include ongoing, general user security awareness, as well as specific training on application security.
- **Security roles & responsibilities**
  Initiatives are underway to further define roles and responsibilities for Office of Enterprise Security liaisons and agency-side security and privacy officers and how each interfaces.

Project Outcomes

The desired outcome of this project is to unify state efforts in protecting Michigan citizens, to deliver the most effective approach possible. This will be accomplished through the development of a statewide security plan. Though the security plan will not create many of the programs necessary for a comprehensive security framework, it will document any existing programs, centrally gathering that information, while identifying those areas still in need of a complete security framework and how MDIT and its Office of Enterprise Security interface with these needs.

As described above, this security plan template and resulting plans will benefit from the direction of NIST, CoBIT and other national standards for best practices. Most importantly, it will be altered to fit the specific needs in protecting state of Michigan needs and assets.

Privacy Project

The state of Michigan has a broad responsibility for the social and legal environment in which private and sensitive information exists. The privacy project—outlined here—is for the state's executive branch, but every part of state government and most citizens have a stake in it. The state focus is on protecting private information related to both citizens and state employees. A critical piece in the success of this effort will be educating and equipping individuals to understand and implement it.

The scope of this project is to create a privacy approach that will define and create appropriate protection for the personal information collected or maintained by the state of Michigan. The state's executive agencies will depend on the outcomes of this project to guard against loss, unauthorized access and illegal use or disclosure.

While many of these efforts are already in place across Michigan's state government, this plan will formalize things in a specific and thoughtful way. The following goals and objectives are guiding the privacy project's development.

Goals and Objectives

In this section, we outline the goals and objectives related to developing a formal privacy approach for Michigan's executive branch:

- **Enhance agency-level accountability**
  Each agency must be responsible for managing personal information under its control as well as the assignment of responsibilities to their staff.
- **Improve notice information**
  Each agency must identify what personal information is gathered and the purpose for usage of that information. Whenever possible, a notice with this information should be given to the individual.
- **Improve consent procedures**
  If at all possible, consent should be obtained before data collection, storage and use. Sensitive information should always be gathered with explicit consent of the individual.
- **Minimize information collection**
  Agencies must only gather information necessary for purposes in support of their department.

- Reduce information retained
  Information should only be retained as required, and must include a set of guidelines for removal. Only the media approved by the agency may be used.
- Improve accuracy
- Meet or exceed privacy regulations
  Appropriate controls must be in place to meet or exceed state and federal privacy regulations or laws.
- Make disclosure more readily accessible
  The privacy policies and procedures should be readily available for public review when required. The policies must be updated when needed and communicated to internal personnel at least annually.
- Increase information access
  Upon request, access by an individual to their personal, private information may be allowed. The agency should also provide the individuals the ability to address inaccuracies.
- Facilitate challenges
  An individual may have the right to challenge an agency's compliance with the principles outlined in the goal section above. A venue must be in place for these challenges to take place.

Initiatives and Timelines

Provided here are the specific initiatives the State is undertaking in order to move this project forward (more details are available in Cyber Security-Appendix B):

- Privacy officer installation (FY 2008)
  MDIT will work with agencies to establish the privacy officer roles and responsibilities.
- State of Michigan privacy office creation (FY 2008)
  In an effort to create a state of Michigan privacy office, we will begin by defining the requirements and then assist with the establishment of it.
- Guideline development & dissemination (FY 2008)
  Guidelines are needed for the agency's privacy policy and procedures. MDIT will work to develop the guidelines and make agencies aware of them.
- Privacy office policy & procedure development
  MDIT will provide guidelines for the privacy office's policy and procedures.
- Data identification & documentation (FY 2009)
  It is necessary for the agencies and MDIT to identify and document where all state of Michigan privacy data are collected, used, displayed and retained.
- Privacy policy compliance process (FY 2009)
  To ensure compliance of privacy policies, MDIT and the agencies will create and implement an agreed-upon process.
- Privacy data electronic management (Ongoing starting in FY 2010)
  The responsibility for the initiatives related to this privacy framework development and implementation falls within three areas of state government: 1) the parent agencies where the data are needed to perform duties as assigned by state or federal laws or regulations; 2) MDIT as custodian of the electronic data; and 3) a new public-facing privacy group referred to in this plan as the state of Michigan privacy office.

I Cyber Security

Risk Reduction

In today's environment, there are numerous threats to the confidentiality, integrity, and availability of state information technology (IT) systems and the data that reside on them. Some of the risks to the state are from ever-changing threats, such as a well-worded phishing scam, while others are from insecure practices that have now become a part of our culture.

The strategies/initiatives that MDIT's Office of Enterprise Security (OES) is undertaking and that are described in this document are intended to reduce the state of Michigan's exposure to IT security risks. They include solutions that ensure systems connecting to the state's network are properly configured, that ensure vulnerabilities are being identified and remediated in an efficient manner and that minimize the potential impact of a security compromise.

A critical piece of this endeavor is assisting state agencies with the development of their own security plans. More details are provided in Cyber Security-Appendix A.

The initiatives we are undertaking follow industry best practices, address security issues identified by independent third parties and auditors and assist in complying with Payment Card Industry (PCI) standards and other state and federal requirements. The discussion includes the implementation of an endpoint security solution, a vulnerability management solution and several other risk-reducing strategies.

Goals and Objectives

- Raise confidentiality, integrity & availability
  In working to ensure that IT systems do not compromise the confidentiality, integrity or availability of state resources and data, specific objectives we are working to ensure systems connecting to state resources are configured in a secure manner and are not compromised thus allowing unauthorized access to state resources. We are also working to secure state-managed systems connected to non-state resources.
- Lower vulnerability
  As we work to identify and remediate system vulnerabilities in a consistent and efficient manner, we will develop processes and procedures to identify and remediate vulnerabilities in a consistent manner, acquire appropriate tools to identify vulnerabilities, integrate vulnerability remediation into MDIT culture and improve compliance with industry requirements/standards.
- Reduce risk
  When it comes to reducing the IT security risk to state IT resources, we will work to reduce presence of IT systems in the demilitarized zone (DMZ), a "neutral zone" between the private network and the public network, and better manage communications to and from state IT resources.
- Improve response time
  In this area, we will work to ensure our ability to identify and respond to IT security incidents in a timely and efficient manner.

Initiatives and Timelines

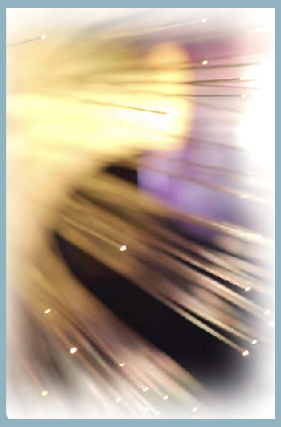
Provided here are the specific initiatives the State is undertaking in order to move this effort forward (more details are available in Cyber Security-Appendix C):

- Endpoint security and network access control (FY 2009)
  This initiative implements an endpoint security solution to ensure that systems connecting directly and remotely to the state's systems are secured appropriately. This will limit the devices which connect to the state's network to those that are confirmed to be running current anti-virus protection and are correctly patched against known vulnerabilities, protecting the state's information resources. Steps to implement these strategies have already begun.

- Formal vulnerability management program (FY 2008)
  This project will identify and remediate system vulnerabilities, including IT systems in the state's public-facing systems, servers on the network and state-managed systems connecting to the state's resources. MDIT's vulnerability management program will further ensure compliance with Payment Card Industry (PCI), state and federal standards for third-party vulnerability assessments and enhance the state's growing e-services to citizens and businesses.
- Critical information security upgrade (CISU) (FY 2008 & FY 2009)
  This is partnership between security and telecom teams is providing greater protection of vital files and data and keeping critical systems available to qualified users. Through 24 initiatives, more stringent safeguards against malicious/unauthorized traffic, and enterprise hardware/software system reconfiguration and upgrades are in motion. In the short term, additional firewalls will be installed to allow for greater flexibility in keeping applications available in the event of a virus outbreak. Also, vendor extranet hardening will occur to assist in keeping vendors from cross infecting each other in the event of a virus outbreak. In the next six months, network perimeter firewall upgrades will take place to allow for more capacity in dealing with increased traffic load due to potential virus activity. Within the next nine months, a project on firewall access control and intrusion prevention will be implemented to allow for greater flexibility in keeping critical systems available in the event of a virus outbreak. Also, Internet traffic blocking will occur; filtering a large subset of traffic types to the Internet that typically are used for malicious activity.

Risk Reduction: Initiatives and Timelines

- **Management of state network communications (FY 2009)**
  Limiting unnecessary communication and traffic from the state's Intranet to the public Internet will lessen exposure to potential threats. This initiative seeks to restrict that communication and reduce the spread of viruses via e-mail gateway filters and preventing infected systems from phoning home to be remotely controlled. Implementation of this initiative has already begun.
- **Policy/standard management and enforcement (Ongoing)**
  This initiative will identify and update legacy security policies and standards to ensure consistency and enforceability more effectively. Organizational and technological changes make it necessary to redefine and communicate existing policies in order to maintain cohesive operations and uniform standards across the enterprise.
- **Off-hours security monitoring and response (FY 2008)**
  Security and support issues can happen at any time and this initiative will establish a plan for providing evening and weekend coverage to support enterprise security functions. Off-hours monitoring and response will enable staff to identify and respond to threats more quickly and efficiently, thus preventing more serious compromise to the state's network.



Business Continuity: Disaster Recovery

A central piece of the MDIT mission is to implement plans and procedures by which state business and IT services may continue in the face of major disasters as well as during acts of terrorism, natural disasters and other emergencies. These efforts are collectively referred to as business continuity. In this section we discuss two categories of activity: disaster recovery and emergency management.

Disaster Recovery

MDIT is establishing processes and infrastructure to equip Michigan departments with the ability to recover any critical functions—no matter the extent of a natural or unnatural disaster—within 24 hours. The 2006 IT strategic plan identified Disaster Recovery (DR) as one of seven technology areas with potential to provide the state the greatest return.

Strategy in this area centers on the over 90 critical functions identified by the state agencies participating in the Continuity of Government Initiative (COGI), led by the Michigan Department of Management and Budget (DMB) and commissioned by the governor. The resulting Secure Michigan document identified disaster recovery as the number one priority for the state's IT program. In addition, disaster recovery requirements often must be met in order to obtain federal or state certification or implemented based upon laws, mandates, audits or guidelines.

Initiatives and Timelines

In the area of disaster recovery, MDIT will be working the following initiatives (more details are available in Cyber Security-Appendix D):

- Refresh the disaster recovery (DR) policy for the state of Michigan (FY 2009)
  It is imperative that the state first provide a clear direction and make a real commitment to implementing disaster recovery for its critical applications. MDIT will propose a policy that defines the level of disaster recovery for an application or technology asset based on business criticality and risk.
- Enhance organizational structure (FY 2008)
  MDIT is immediately considering assigning senior-level MDIT personnel to either a DR workgroup or committee. This group will drive decisions with input from the CIO and CISO.
- Execute a formal gap analysis study (FY 2008 & 2009)
  The gap analysis will require the input of the technical personnel assigned to specific critical and ancillary systems. Assessing interaction with other systems and the gap analysis may require MDIT and agency personnel to confer on redundancy, recovery time and inter-relational issues. Each year, 35 critical systems will undergo gap analysis on their DR level. Agency decision makers will benefit from this information as they determine requirements for implementation.
- Develop a technological needs list for data centers (FY 2008 & 2009)
  Each year, 15 of the 53 critical systems will be assessed. The resulting data will be utilized to illuminate shared component purchases. Based on the steering committee's input, outside contract integration experts may be called upon for assistance.
- Purchase a DR planning software technology (FY 2008)
  A DR planning software technology will be procured that contains functionality, including a granular level of update control; templates for different types of DR plans; compatibility with major software vendor call list applications and interface hooks to software. Use of the software should begin immediately after its purchase in 2008. However, configuring the software to the granular level of access that is needed throughout all of MDIT and the agencies will require one full-time employee.

- Integrate the DR planning software into the change management workflow (FY 2009-2010)
  Changes to any critical system's infrastructure requires a re-evaluation or gap analysis to determine if the recovery time objectives can still be met. The current change management workflow software should automatically notify the appropriate individuals of the need to reassess their piece of the DR plan. The gap analysis will identify necessary changes for action by the steering committee.
- Begin DR testing (FY 2009-2010)
  It will be important for us to test environments and make adjustments as we move forward. The testing should be phased in from modest level tests, to ensure no impact to the customer, to full failover tests that require customer use of the redundant system. Each group of individuals on the DR testing team will be obtained from the pool of technical staff assigned to the various critical systems.

Business Continuity: Emergency Management

We are aligning our emergency management approach with Michigan's overall information technology strategic plan ,as well as Governor Granholm's Hometown Security vision to "protect our citizens and make Michigan's communities safer." This vision recognizes the benefits of a fully-engaged, prepared, trained and well-equipped state agency.

Focused on minimizing the effects from acts of terrorism and natural disasters and other emergencies, we are embracing a department-wide approach and perspective to all planning and response activities, acknowledging that no individual group stands alone.

Emergency management is a dynamic process that includes planning, training, conducting disaster exercises, testing equipment and coordinating activities. The primary goal is to create and maintain an effective organization to mitigate, prepare for, respond to and recover from major threats to lives, livelihoods and property.

Goals and Objectives

- Formalize MDIT's emergency management planning, response and recovery
  We are developing written policies and procedures, an emergency management plan, an emergency operations planning process and are also working to operate and manage the Emergency Coordination Center and train staff.
- Protect critical Infrastructures
  Critical infrastructures are the complex systems that provide the services essential in our lives. They are currently organized into 17 sectors. Critical infrastructure protection (CIP) is a priority for the federal government, the private sector and state, local and tribal governments. MDIT, through OES, has been an active member of the state's CIP Board since its inception.

Initiatives and Timeline

- Policies and procedure development (FY 2008)
  Develop and implement an emergency management and operation plan policy and procedure.
- Formalize emergency management plan (Ongoing)
  Document the emergency management response organization, the responsibilities of the response organization, define the concept of operation and define the development and maintenance of the plan.
- MDIT emergency operations planning (FY 2008)
  Establish a MDIT emergency operations planning group, require development of emergency operation plans from MDIT groups, provide support to MDIT organizations in the development of emergency operations plans and develop exercises internal to MDIT to test the plan.
- Emergency Coordination Center operations & management update (FY 2008)
  Develop and document ECC procedures and develop an ECC located away from major attack centers such as downtown Lansing or the data centers.

- Emergency management plan training (FY 2008)
  Develop plan overview, an operational plan training and an emergency training for ECC Members, then provide training to MDIT staff to understand, deter, and interdict.
- Cyber attack mitigation (Ongoing)
  In this area, we are working to further mitigate cyber attacks against MDIT's critical infrastructure. We will update and refine standards/procedures, refine and establish processes and procedures to capture relevant information security risks, disseminate information throughout MDIT and develop metrics to support resource requests.
- Homeland Security relationship enhancement (Ongoing)
  We will continue as an active member in the state's critical infrastructure protection committee, participating and partnering with MSP's Emergency Management Division, participating in MSP-sponsored exercises and maintaining the MDIT Annex to the Emergency Management Plan.
- Other collaborative relationship enhancement (Ongoing)
  We will also continue collaborative relationships with various government and private entities to mitigate cyber attacks and information security risks. Organizations include: Multi-State Information Sharing and Analysis Center (MS-ISAC), InfraGard and NASCIO.
- State-local information sharing enhancement (Ongoing)
  We will increase the exchange between the Michigan Information Sharing and Analysis Center (MI-ISAC) and local units of government, establishing relationships with local IT organizations for the dissemination of cyber security information, rolling out the Multi-State Information Sharing and Analysis Center (MS-ISAC) portal and establishing procedures for rolling it out.
- Homeland Security grant-funding methodology (FY 2008)
  In an effort to further maximize homeland security grant dollars, we will continue to develop and maintain a grant distribution methodology with agreed-upon priorities and criteria requiring that all projects support the plan, demonstrate long-term benefits to the state and have systems in place for these benefits. We will also develop a framework and methodology for evaluating grant expenditures and effectiveness.
- Cyber security awareness campaign (Ongoing)
  We will continue the development of MDIT's cyber security Web site to promote self-reliance and personal safety, and develop a MDIT awareness program.

Training and Culture

A fundamental assumption in enterprise security management is that plans alone are not effective unless they are supported by people and a process brought together by good management skills and a philosophy of partnership. It is important to remember that all groups within MDIT will respond to and be involved with implementation of this plan. There must be concern, interest, support and participation by everyone within the department; this is not a one person job. Without full participation, there cannot be true success.

In order to protect state assets to the fullest extent possible, a multi-layered and highly extensible security architecture has been designed. This architecture seeks to utilize the absolute "best of breed" security products, devices and tools, combined with careful planning and policymaking, across the entire state of Michigan enterprise.

In addition to utilizing the best products and tools for each situation, an overall design/implementation strategy has been developed to further enhance the security of our data and resources. By utilizing risk analysis, security policy creation—including at the agency level (more on this in Cyber Security-Appendix A)—applications and data sources can be protected based on appropriate sensitivity levels.

According to this methodology, each e-government initiative data source or application is to be evaluated based upon its sensitivity, attractiveness to intruders and dependencies. Using this evaluation, the data source can be given a security rating that corresponds to a predefined level of protection that must be provided for that class of information. These different levels of protection will be constructed with the information at stake in mind. They will be composed of different combinations of security devices, tools and configurations designed to guard the data source from theft or attack in the most up-to-date and effective manner possible at all times.

Security Awareness

People, who are all fallible, are recognized as one of the weakest links in securing systems. The purpose of OES's security awareness training and education is to enhance security in Michigan by:

- Improving awareness of the need to protect system resources.
- Developing skills and knowledge so computer users can perform their jobs more securely.
- Building in-depth knowledge, as needed, to design, implement or operate security programs for organizations and systems.
- Educating users on the state of Michigan's Acceptable Use Policy and the signing of a state security agreement.
- Making state computer system users aware of their security responsibilities and teaching correct practices helps users change their behavior. It also supports individual accountability, which is one of the most important ways to improve computer security. Without knowing the necessary security measures and to how to use them, users cannot be truly accountable.
- Continuation of Homeland Security coordination by Michigan State Police.

The nervous system of Michigan's critical infrastructures are the hundreds if not thousands of interconnected computers, servers, routers, switches and fiber optic cables that make up state government's computer network. The healthy functioning of this network is essential to the overall health and welfare of Michigan's economy and security.

Michigan has been successful in using its computer network, along with the Internet, to increase commerce, community interaction and learning. However, at the same time, the use of the Internet has increased Michigan's risk of falling victim to Internet crime or cyber terrorism. Hackers, thieves and terrorists have adapted quickly to foil enhanced security mechanisms, finding new ways to steal personal and financial information. As a result, the need for increased security and security awareness is critical.

The federal government recognized and published the Computer Security Act of 1987 in response to Internet crime and cyber terrorism. This act requires periodic security awareness training for all federal employees involved in the management, use or operation of a computer system. Making staff aware of these threats has proven to be a very cost-effective countermeasure against security violations and/or mishaps. Gartner analysts Quellet, Proctor, and Witty (2006) estimated that there is a 0.8 probability of 25 % productivity savings in information security due to the workforce awareness of threats, risks and controls which reduces the number of security incidents. Staff that has been trained in a security awareness program will have the knowledge to prevent known incidents and/or mitigate the damage done when an incident does occur.

All of the work involved in creating a solid risk management and business continuity plan are worthless without a comprehensive awareness and training program for the individuals who are carrying out the plan. Therefore the development and implementation of a comprehensive training plan for everyone in MDIT—from employees to supervisors and functional managers to executive-level managers—is paramount.

Goals and Initiatives

Provided here are the specific initiatives the State is undertaking in order to move this effort forward (more details are available in Cyber Security-Appendix E):

Goal 1: Raise awareness
MDIT staff must understand the key elements and the necessity for information security as well as their personal role in security.

- Initiative 1: Organizational policies & standards update
- Initiative 2: Education/training enhancement
- Initiative 3: Security awareness assessment
- Initiative 4: Positive security behavior program development (FY 2007)

Goal 2: Enhance staff skills
We must educate and train staff on how to run systems most efficiently and how to develop and apply security controls.

- Initiative 1: Key terms & concepts information program
- Initiative 2: Categorical training program (FY 2008)

Goal 3: Improve over time
Practical and measurable outcomes are key for gauging our success and for retaining continued funding and support.

- Initiative 1: Outcome tracking procedure development (FY 2008)
- Initiative 2: Quarterly survey development (FY 2009)
- Initiative 3: Online measurability campaign (FY 2009)
- Initiative 4: Outcomes communication development (FY 2007)

Michigan's Enterprise Security Future

As part of Michigan's 2006 IT strategic planning process, MDIT and its clients—via the Michigan Information Technology Executive Council (MITEC)—examined technology and government business trends and their impacts. They reviewed both personal, professional observations and key worldwide trends as explained by industry experts, including Gartner and Forrester. The result of this exercise was the identification of technology solutions with the greatest ability to improve government services.

MITEC, in close collaboration with MDIT, chose specific technology solutions for further investigation of their possible enterprise-wide adoption. Since these technologies were selected, subcommittees comprised of representatives from MITEC and MDIT have reviewed where these technologies may apply to specific agency clusters and the state as a whole. The subcommittees prepared business case analyses of the most promising projects for each technology with the intent to integrate these technologies into the upcoming budget cycle recommendations for funding enterprise projects. One solution with the potential to provide the state with great benefit is mobile worker.

One Solution: The Mobile Worker

As noted in Michigan's IT strategic plan, the mobile worker initiative was designed around providing remote workers access to critical data, requiring adaptation and innovation. Technologies that support this trend include tablet PCs and laptops, Blackberry-like communications devices and wireless capabilities. The need for state employees to remotely access systems, services and data continues to increase. Advances in computer technology, the growth of wireless and digital products and the continuing expansion of the Internet are evidence that employees can work at any time and from almost any place.

According to research firm IDC, the global mobile workforce is expected to grow by more than 30 % by 2009. Given the shift to mobile working, business performance and productivity will soon depend on an organization's ability to understand, manage, control and secure tools and technologies that enable its mobile workers. Chief among these tools is remote access; connectivity to internal networks, applications and data from outside the office via mobile devices and wireless technologies.

In some parts of State government, the mobile worker concept has already been applied:

- Inspectors from the Bureau of Construction Codes are currently using rugged laptops on-site to perform inspections. Inspectors are able to log-in at home before coming to work in the morning to upload yesterday's inspections as well as download their current permits
- Michigan State Police officers have the capability to access various criminal justice computer systems from wireless laptops in their vehicles
- Unemployment Agency investigators are able to document their investigations while in the field and upload the changes to the main computer systems every night from home
- Department directors and key executives are piloting the use of Blackberry communication devices to improve productivity and be more accessible while away from their offices

MDIT will continue to evaluate wireless technologies and mobile devices and their associated risks to determine mitigation requirements and offer viable wireless and mobile solutions to our clients. The department also needs to ensure that agency executives are in a position to make informed decisions regarding the use of wireless technologies by their agency. This will assist agency staff in understanding the position taken by their respective department regarding wireless and what options have been approved and are available.

A comprehensive plan will be developed to address all aspects of deploying wireless technologies and mobile devices at the state of Michigan. Additional plans may be needed to address issues specific to the implementation and management of mobile and teleworker programs.

In addition to architecture, security, support and management issues, there is an identified need to actively manage user expectations regarding the use of wireless and mobile devices. The plan will include communications and planning components, with a focus toward arming state users with wireless security knowledge and awareness.

Existing services that support remote access to state resources—such as two-factor authentication with SecurID, VPN, dial-up—will be expanded to encompass any potential issues created by the introduction of wireless technologies.

MDIT will adapt policies, procedures and standards necessary to ensure that the state's wireless communications infrastructure/framework is deployed in an efficiently managed and secure way. Policies should allow for the education of users and define specific measures to increase awareness of wireless network security.

Wireless Technology Goals and Initiatives

In this area, our goals are focused around improving wireless service options, mitigating wireless technology risks and increasing wireless security knowledge and awareness among users. Specific initiatives that we are undertaking are as follows (more details are available in Cyber Security-Appendix F):

- Information security policy establishment (FY 2008) - An information system security policy addressing wireless technologies must be established.
- Change & control management process development (FY 2008) - Configuration/change control and management will ensure that equipment (such as access points) has the latest software release including security feature enhancements and vulnerability patches.
- Configuration standardization project (FY 2008) - Standardized configurations are needed to reflect the security policy, to ensure change of default values and to ensure consistency of operation.
- Staff training plan (FY 2008) - Security training to raise awareness about the threats and vulnerabilities inherent in the use of wireless technologies, including that robust cryptography is essential to protect the "radio" channel and that simple theft of equipment is a major concern.

Emergency Management

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Checklists referenced in the Emergency Management Plan are available at http://connect.michigan.gov/checklists

Purpose

The Emergency Management Plan (EMP) of the Michigan Department of Information Technology (MDIT) is intended to establish policies, procedures and an organizational structure for responding to emergencies that are of a magnitude to cause a significant disruption to the state of Michigan. The plan describes the roles and responsibilities of MDIT during emergency situations and meets the requirements and objectives set forth in the Emergency Management Act (Act 390, Public Acts of 1976, as amended), the state of Michigan's Emergency Management Plan and U.S. Homeland Security Presidential Directive 5 (HSPD-5).

In addition, the plan acts as a supplement to MDIT's administrative policies and procedures. When the plan is activated, it sets forth the authority to direct operations, direct staff assignments, procure and allocate resources and take measures to restore normal services and operations.

This plan does not supersede or replace procedures for safety, hazardous materials response or other procedures that are already in place within the state. It supplements those procedures with a temporary crisis management structure that provides for the immediate focus of management on response operations and the early transition to recovery operations.

Nothing in this plan shall be construed in a manner that limits the use of good judgment and common sense in matters not foreseen or covered by the elements of the plan.

Assumptions

The MDIT Emergency Management Plan assumes the following:

An emergency or a disaster may occur at any time of the day or night, weekend or holiday, with little or no warning.

Disasters may be statewide – or more limited in scope.

- Emergencies or disasters can cause human suffering, injury and death, property damage, environmental degradation, loss of essential services, economic hardship and disruption to state, as well as other governmental, entities.

- The successful response to an emergency or disaster is not predictable; therefore, published operational plans, such as this, should serve only as a guide and a checklist. It may require modifications in order to meet the requirements of the emergency.
- Demand for timely information may be overwhelming. Sufficient staff must be identified, provided and well trained to meet this demand.
- Due to the dynamic nature of emergency planning, this plan must continue to evolve to keep pace with changes within MDIT.

Emergency Operations

General

The EMP is based upon the premise that emergency functions for groups within MDIT will generally parallel their normal day-to-day functions. To the extent possible, the same personnel and material resources will be employed in both cases. In large-scale disasters, however, personnel may be required to draw on their basic personal strengths and use them in areas of greatest need.

In the event of an emergency, most operational groups within MDIT will have emergency functions in addition to their normal, day-to-day duties. Each operational group is responsible for developing and maintaining its own emergency operation plans. Those day-to-day functions that do not contribute directly to the emergency operation may be suspended for the duration of any emergency, and efforts that would normally be required of those functions will be redirected to accomplish the emergency tasks of other departments involved in emergency operations.

Direction and Control

All emergency operations will be directed by the MDIT director or designee. In the absence of the MDIT director or designee the director of the Office of Enterprise Security will assume control of the emergency response.

During an emergency, the MDIT director and the MDIT crisis management team will meet on an ongoing basis regarding policies and legal concerns in order to determine what actions are required beyond the standard emergency response protocols.

Direct operational control of a major emergency is the responsibility of the Emergency Coordination Center (ECC).

Levels of Emergencies

Emergency conditions vary with each incident and activation. As a guide, three levels of emergency are specified, as follows:

- Level 1-an incident with limited impact which does not affect the overall functional capability of MDIT or the state. Planning and response is carried out at a limited local level. The Emergency Management Plan would not be activated.
- Level 2-an incident that significantly disrupts one or more operations of MDIT or MDIT's customers. Multiple MDIT resources are involved. The Emergency Management Plan would be activated to the extent necessary.
- Level 3- disaster conditions in which MDIT must activate the full Emergency Coordination Center (ECC) in order to address immediate emergency response. Emergency conditions are widespread and MDIT must be self-sufficient for a period of hours to several days.

Generally, the ECC is activated under Level 2 and 3 emergencies.

Emergency Coordination Center

MDIT, in accordance with standard emergency management system planning, has established the Emergency Coordination Center (ECC).

The ECC will:

- Provide a central point where:
  - Information pertaining to an incident is received and analyzed
  - Verification of information can be made
  - Incident information is immediately available
  - All resource status information can be tracked
  - Incident strategies are implemented
  - Critical resources are assigned to tactical operations
- Provide for the efficient and effective use of all modes of communication available for the incident
- Enhance coordination between offices/divisions involved in the incident
- Provide for sustaining operations during extended periods of time
- Establish continuity of the response efforts through "round-the-clock" staffing at a centralized location, the ECC. This allows a systematic means to conduct planning and tactical meetings and inform members of the new elements of the incident action plan through briefings when shifts change.

Location

The primary ECC is located at the Secretary of State building at the Secondary Complex in the Data Center Operations Production conference room. The backup ECC is located downtown in the Hannah building in the Telecommunications conference room. The location to be used will be determined by the incident commander based on the nature of the emergency.

Operational Readiness

The Office of Enterprise Security is responsible for the operational readiness of the primary and secondary ECC locations. This includes maintaining operational capabilities and the exercise of functions at the two locations.

Staffing

The staffing needs of the ECC will be determined by the nature of the event and the duration of response and recovery activities. Each MDIT office/division participating in the ECC function will be responsible for providing the staffing necessary to sustain ECC operations for the duration of their participation.

Activation

The facilities used for the ECC are either conference rooms or training rooms, but not dedicated ECC facilities. The ECC will be continuously maintained in a state of readiness for conversion and activation and will serve as the centralized location to gather, check in and be assigned a role in the ECC. Response activities and work assignments will be planned, coordinated and delegated from the ECC.

A determination to activate the ECC, and the level of activation (full or partial), will be made by the emergency management coordinator (EMC) in consultation with the director of MDIT or designee.

Once the decision is made to activate the ECC , the MDIT director and the EMC will appoint an incident commander (IC) from a predefined list. Depending on the character, scope and magnitude of the emergency incident, the IC will mobilize appropriate ECC participants.

ECC members will receive an emergency group page, and/or text message or be notified individually, depending on the scope of the emergency. If notified electronically, ECC members will call the MDIT Service Management Center (or e-mail DIT-SMC@michigan.gov) at 517.322.6611 or 1.877.766.4348 (1.877.SOM.4DIT), leave estimated time of arrival and notify their designated backup staff as needed. The IC or his/her backup will coordinate the emergency response from the ECC.

Access

Access to the ECC is restricted to authorized emergency management personnel. All others must obtain approval for admission from the IC.

All personnel working in the ECC are to sign in and out on the ECC Roster, which will be located on a table at the door.

E-Team

The ECC will utilize E-Team software to track incidents. E-Team is an off-the-shelf Web-based critical incident management software system used by the State Emergency Operations Center (SEOC) and the MDIT Emergency Coordination Center (ECC) to track the status of an incident. E-Team is designed to manage emergencies and events and includes the following tools:

- Incident reporting and tracking
- Procedures and checklists
- Situation reporting
- Intelligence gathering and dissemination
- Resource and asset management
- Tip reporting
- Action planning
- Duty and call logs
- Critical infrastructure reporting
- Organization charts
- Hospital and shelter status
- Consequence Assessment Tool Set (CATS) hazard modeling interface
- Personnel management
- Real-time messaging and chat capabilities

Communication

During and after emergencies, the ECC will be the central point for both internal and external communications.

Emergency actions to be taken, and other vital information, will be communicated to employees through phones, cell phones, messengers (as appropriate), e-mail and Web sites.

During and after a disaster, outgoing phone calls must be restricted to emergency calls to outlying sites and to emergency service providers. Employees must refrain from tying up telephone lines and thereby impeding necessary communications.

In the event of a declared emergency, communication to employees at home and at work will be handled as follows:

- After-hours, a phone-tree system will be used by offices/divisions to communicate with employees. It is the responsibility of each office/division to develop their own phone tree system that outlines how, and in what order, calls are made. This information will be placed in the office/division emergency operation plan (EOP).
- The ECC will maintain an employee emergency hotline that will be maintained by the public information officer (PIO). The hotline number is 517.241.4560 or 877.766.4348, option 6. During an emergency, important messages will be placed on this hotline.
- The ECC will also use the MDIT Intranet (http://connect.michigan.gov/portal/site/mdit) and the MDIT Internet site (http://www.michigan.gov/dit) to communicate to employees and customers.
- The ECC will hold regular status conference calls to update management on the current status of the emergency.

Media Calls

During an emergency, the media may request information from department staff. These contacts may be in the form of general inquiries or requests for sensitive information. Because these contacts are quite varied in nature and often involve administrative decision-making, it is essential that all such contacts be immediately directed to the PIO. While MDIT must strive to be responsive in emergency situations, it is also our obligation to collect and disseminate accurate information. A centralized, coordinated approach is required to accomplish this goal.

Organization and Assignment of Emergency Response

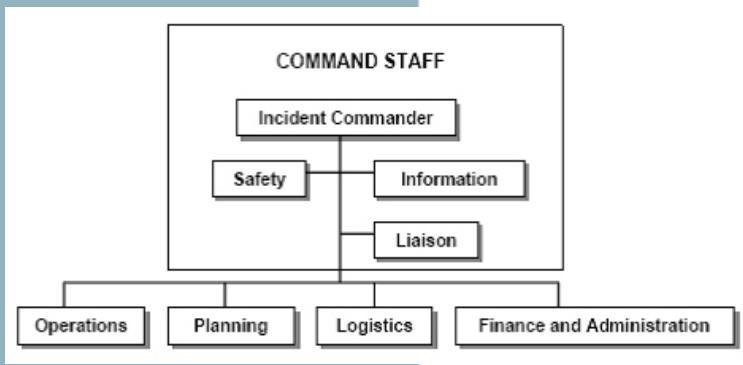
General

All incidents, no matter the size, require a coordinated effort to ensure an effective response and the efficient, safe use of resources. The MDIT utilizes the incident command system (ICS) as the basis for its ECC operations. ICS is designed specifically to allow emergency responders to adopt an integrated organization without being hindered by jurisdictional boundaries.

What is an ICS?

The ICS model is a major component of the National Incident Management System (NIMS). The NIMS was created in February 2003 as a result of Homeland Security Presidential Directive 5 (HSPD-5).

In the early 1970s, the ICS model was first developed as a way to manage emergency response to rapidly-moving wildfires. It addresses the following problems:

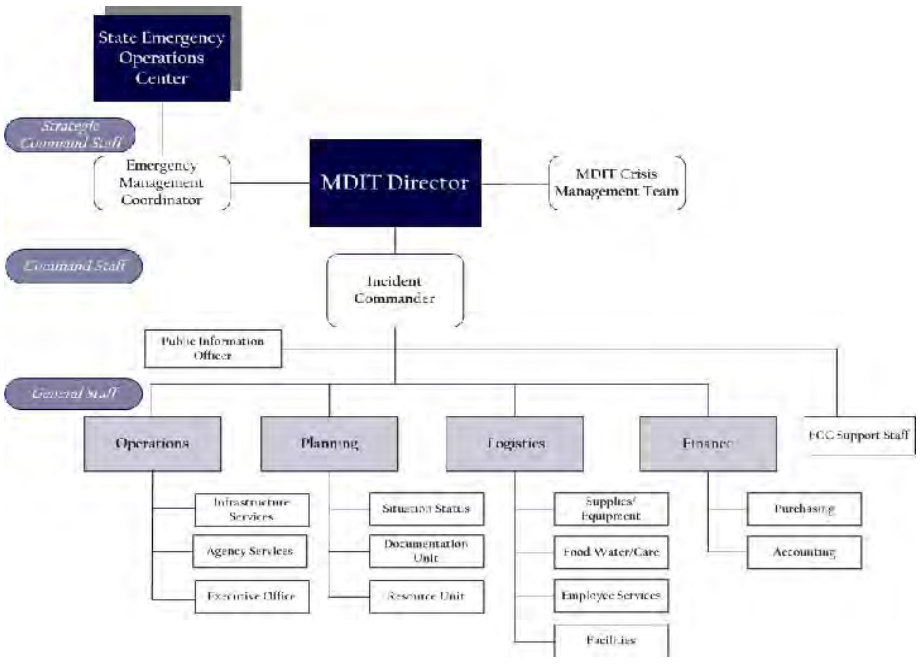


- Too many people reporting to one supervisor
- Different emergency response organizational structures
- Lack of reliable incident information
- Inadequate and incompatible communications
- Lack of structure for coordinated planning among agencies
- Unclear lines of authority
- Terminology differences among agencies
- Unclear or unspecified incident objectives

An ICS enables integrated communication and planning by establishing a manageable span of control. An ICS divides an emergency response into five manageable functions essential for emergency response operations: command, operations, planning, logistics and finance and administration. The graphic here shows a typical ICS structure.

The following is a summary of the duties associated with each ICS function:

- The incident commander (IC) is responsible for all aspects of the response, including developing incident objectives and managing all incident operations.
- The command staff is responsible for public affairs, health and safety and liaison activities within the incident command structure. The IC remains responsible for these activities or may assign individuals to carry out these responsibilities and report directly to the IC.
- The public information officer's (PIO) role is to develop and release information about the incident to the news media, to incident personnel and to other appropriate agencies and organizations.
- The liaison officer's role is to serve as the point of contact for assisting and coordinating activities between the IC and various agencies and groups.
- The safety officer's role is to develop and recommend measures to the IC for assuring personnel health and safety and to assess and/or anticipate, hazardous and unsafe situations. The safety officer also develops the site safety plan, reviews the incident action plan for safety implications and provides timely, complete, specific and accurate assessment of hazards and required controls.
- The general staff includes operations, planning, logistics and finance/administrative responsibilities. These responsibilities remain with the IC until they are assigned to another individual. When these responsibilities are established as separate functions under the IC, they are managed by a section chief and can be supported by other functional units.
- The operations staff is responsible for all operations directly applicable to the primary mission of the response.
- The planning staff is responsible for collecting, evaluating and disseminating the tactical information related to the incident and for preparing and documenting incident action plans (IAPs).
- The logistics staff provides facilities, services and materials for incident responses.
- The finance and administrative staff is responsible for all financial, administrative and cost analysis aspects of the incident.



MDIT's Implementation of ICS

MDIT utilizes a modified ICS organization that will be called to duty during times of emergency, when normal operations are not sufficient to meet the immediate or overwhelming needs that occur. The organization will be staffed by representatives drawn from each bureau within MDIT. MDIT implements three functions within its emergency management organization:

- Strategic Command
- Command
- General Staff

The relationship among the teams is shown in the graphic below:

MDIT Emergency Management Organization

The major elements, as outlined in the graphic above are detailed below. More information and a complete checklist by organizational role is available at: http://connect.michigan.gov/checklists

State Emergency Operations Center (SEOC)

The SEOC is the primary center for coordination of state government response and recovery operations in times of disaster or emergency. The SEOC is maintained and operated by the Emergency Management Division, Michigan Department of State Police. The MDIT emergency management coordinator is MDIT's representative to the SEOC.

MDIT Emergency Coordination Center (ECC)

The ECC is the site(s) established by MDIT where agency officials gather to provide logistical support, policy direction and technical assistance to the emergency management coordinator in the SEOC and to strategically plan and implement the disaster response and recovery activities.

Strategic Command

The strategic command function is made up of the MDIT director, the emergency management coordinator and the crisis management team. This group has the following responsibilities:

- Provides strategic direction to the incident commander
- Sets priorities in the recovery
- Approves major expenditure of emergency funds and the acquisition of resources
- Crafts MDIT's communication strategy and authorizes media releases

MDIT Director

The MDIT director is the executive-level leader of MDIT's response to an emergency or disaster for the department. The MDIT director provides overall direction to the emergency management organization and represents the department to key constituents.

Crisis Management Team

The crisis management team (CMT) is a group of MDIT executives, appointed by the MDIT director. The CMT evaluates information from various sources during the event and advises the MDIT director on appropriate actions requiring his/her decision. The crisis management team is also responsible for the review and approval of the emergency management plan.

Emergency Management Coordinator (EMC)

The EMC acts for and at the direction of the MDIT director upon the activation of the SEOC or the declaration of a state of disaster or emergency. The EMC acts as liaison between MDIT and the Emergency Management Division of the Michigan State Police in all matters of emergency management. The EMC is also responsible for preparing and continuously updating an annex to the Michigan Emergency Management Plan, providing for the delivery of emergency management activities by the department.

The EMC works in cooperation with the director, deputy director(s) and all division directors in MDIT to mitigate, prepare for, respond to and recover from emergencies and disasters affecting the programs and responsibilities of the department. The EMC is responsible for developing and implementing strategies that encompass planning, training and exercises that maintain a state of readiness within MDIT. Specific responsibilities of the EMC include:

- Mitigation:
  - Identifying and developing opportunities to lessen the impact of emergencies or disasters on people, property, natural resources, constituent and government services
- Preparedness:
  - Writing emergency management plans
  - Training appropriate staff
  - Designing and conducting exercises of plans
  - Coordinating preparedness activities
  - Relevant outreach activities on behalf of MDIT
- Response:
  - Providing analysis and recommendations in emergency and disaster situations
  - Acting as a liaison to local, state and federal government agencies
  - Coordinating MDIT response activities when deemed appropriate by the director
- Recovery:
  - Coordinating MDIT recovery activities

Command Staff

The command staff is made up of the incident commander (IC) and the public information officer (PIO).

This group handles the overall operational management of the incident, including:

- Command staff assignments required to support the command function
- Establishment of additional command staff positions not specifically identified in the general staff functional elements
- Establishing command
- Ensuring responder safety
- Assessing incident priorities
- Determining operational objectives
- Developing and implementing the incident action plan (IAP)
- Developing an appropriate organizational structure
- Maintaining a manageable span of control
- Managing incident resources
- Coordinating overall emergency activities
- Authorizing the release of information to the media
- Keeping track of costs

Incident Commander (IC)

The incident commander (IC) leads the ECC and has the following responsibilities during an emergency event:

- Establishes incident management objectives and strategies
- Develops incident objectives upon which subsequent incident action planning will be based
- Ensures all functional area activities are directed toward accomplishment of the strategy
  - Modifies procedures or organizational structure to:
  - Align as necessary with the operating characteristics of their specific jurisdictions
  - Accomplish the mission in the context of a particular hazard scenario
- Approves the incident action plan (IAP)
- Directs the identification and location of facilities based upon the requirements of the situation at hand
- Approves all requests pertaining to the ordering and releasing of incident resources
- Expands the organization from the top down as incident complexity increases and functional responsibilities are delegated
- Expands the number of management positions concurrently with structural expansion to adequately address the requirements of the incident

This position is designated from a predefined list of ICs by the MDIT director and the EMC when the emergency coordination center is activated.

Public Information Officer (PIO)

The public information officer (PIO):

- Maintains liaison with the news media
- Provides news releases and other information as approved by the MDIT director
- Assures that official statements are issued only by those administrators authorized to issue such statements
- Provides information for response to inquiries from the public relative to the disaster
- Disseminates information to MDIT staff and activates staff emergency hotline
- Note: During an emergency the position of public information officer is vital for communicating with staff, other agency PIO's and the governor's communications staff to ensure consistency of message.

ECC General Staff

The ECC general staff is a group of incident management personnel that is:

- Organized according to function
- Reports to the incident commander
- Consists of the leaders of the following teams: operations team, logistics team, planning team, finance team

Emergency Coordination (ECC) Support Staff

The ECC support staff are assigned to the incident commander (IC). Their primary responsibilities include setting up the ECC. They arrange for ECC staff support and serve as the primary internal staff contact for the ECC. They also monitor internal ECC operations to ensure the completion of transfer and exchange of information between teams.

ECC Operations Team

During an emergency event, the IC will build an operations team made up of predetermined staff members from MDIT.

The operations team is responsible for the overall coordination and efficient use of resources in emergency response. Team members are responsible for prioritizing operations and for managing operation response as determined by the office/divisions emergency operations plan.

Planning Team

The planning team has three primary units. It may include a number of technical specialists who will assist in evaluating the situation and try to anticipate the need for additional personnel and equipment.

Situation Status Unit

The Situation status unit receives and maintains updated field reconnaissance information on the status of all field operations, damage assessment, numbers of people injured, evacuated and outside events - including weather information - that may affect field operations. This information is posted on maps and status boards in the Emergency Coordination Center (ECC).

Situation status also identifies inaccuracies and inconsistencies in reports and clarifies miscommunications. They provide ongoing status reports of the emergency situation and the resources assigned to it. They maintain the ECC duty log using the E-Team software.

Documentation Unit

The documentation unit:

- Maintains accurate and complete incident files, including a complete record of the major steps taken to resolve the incident
- Provides duplication services to incident personnel
- Files, maintains and stores incident files for legal, analytical and historical purposes
- Prepares the incident action plan (IAP)
- Maintains many of the files and records that are developed as part of the overall IAP and planning function

Resource Unit

The resource unit:

- Makes certain that all assigned personnel and other resources have checked in at the incident
- Has a system for keeping track of the current location and status of all assigned resources and assigned personnel
- Maintains a master list of all resources committed to incident operations
- Categorizes resources by capability and capacity across disciplines
- Continuously tracks resource status to effectively manage their employment

Logistics Team

The logistics team meets all support needs for the incident. This team:

- Orders resources via procurement authorities from off-incident locations
- Provides facilities, transportation, supplies, equipment maintenance and fueling, food service, communications and medical services for incident personnel

Supplies/Equipment

This position is responsible for procuring and distributing the equipment and supplies requested by the IC and/or operations team lead, required for supporting emergency response and recovery activities. He/she coordinates recordkeeping with the finance team and works with the planning team on budgeting and funding authorization.

Food Water/Care

This position is responsible for providing rest areas and, as needed, sleeping facilities and arranging meals for the ECC. He/she is responsible for obtaining and allocating food and water supplies to support emergency staff needs.

Employee Services

This team determines the need for and maintains records on the status of MDIT employees. They provide personnel support by filling staffing needs using new hires, volunteers and temporary services as necessary. They maintain personnel records and handle claims and other personnel matters and issues. They forward all records of hours worked to accounting for inclusion in the disaster expense report. They coordinate emergency services, mental health care and crisis counseling.

Facilities

Facilities receives reports from various organizations in the field regarding the status of MDIT buildings and properties. They coordinate and direct emergency repair and restoration operations for all utilities and facilities. They check all utilities for safety and operational status. They coordinate with outside public utilities as needed. They assist with emergency power and support for all field operations and the ECC.

The facilities team coordinates with the Department of Management and Budget (DMB) the inspection of all MDIT buildings or leased space. They receive preliminary safety reports and provide information to the situation status unit. They continue to manage field inspections and assist in identifying priority projects. They provide for re-occupancy of buildings and notify the recovery team of usable facilities.

They receive and evaluate initial damage reports from DMB. They maintain complete records and files of all damage, by building, and provide current and ongoing damage estimates and related information to the situation status unit on an ongoing basis.

The facilities team sets up and manages emergency maintenance, repair and construction projects as authorized by the MDIT crisis management team. They develop a repair/construction plan by priority, keeping documentation for disaster program requirements.

Finance Team

The Finance Team is responsible for managing and supporting accounting, disaster statistics and purchasing. The team is responsible for all financial information, accounting and immediate financial support for resources and emergency payables. It provides reports to the Incident Commander (IC) and may continue operations and track costs during long- term recovery. The Finance Team documents expenditures, purchase authorizations, damage to property, personnel time, equipment usage, injury claims and vendor contracting.

The team is responsible for timekeeping and cost analysis, tracking costs throughout the incident and overall fiscal guidance. The team reviews the MDIT budget and identifies existing sources of funding for disaster expenditures. The team forecasts expenses for emergency/disaster operations and provides routine updates on total disaster expenditures.

Purchasing

Purchasing is responsible for processing the purchase orders and other MDIT purchasing documentation to support the MDIT's emergency response and for maintaining appropriate files and source documents for supporting disaster recovery applications.

Accounting

This team manages the accounting, auditing and documentation of all emergency expenditures including labor, benefits, purchases and contracts. They set up and manage the emergency accounting system. They compile damage cost estimates and arrange for sources of emergency funding. They maintain a central documentation file. They provide auditing of all expenditures to verify budget accounts, invoices and documentation. They also receive invoices and process authorizations for payment.

Employee & Financial Services

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Employee & Financial Services

Vision of Action

The Office of Employee and Financial Services (OE&FS) serves as the administrative and financial arm of the department, providing oversight of the department's budget, audit and finance operations, human resources, administrative policy development, facility management, organizational and human capital management programs and all other administrative functions of the agency.

Administrative functions within an IT organization are one of the most overlooked, yet most critical, aspects impacting organizational success. These are all critical functions for success and therefore must be included and planned for in a strategic sense. OE&FS has a clear vision for the future that can be categorized into five major focus areas:

- Create opportunities to better understand customer needs and enhance accountability
- Workforce: Recruit, retain and recognize a high-performing technological workforce
- Workplace: Establish standards and procedures requiring and equipping a high-performance workforce
- Workforce Development: Support, enable and help drive Michigan's IT plan goals and strategies through our IT workforce
- Vision & Values: Support a culture where employees take pride and responsibility for delivering exceptional service

The office consists of a number of areas focused on serving the needs of both agency management and department employees who partner with Michigan's Department of Civil Service, State Budget Office (SBO) and the Department of Management and Budget (DMB). These employees belong to various parts of the organization as described in the next section.

Overview

Detailed below is an overview of the various functions of the Office of Employee and Financial Services (OE&FS).

Employee Services

Human Resources

This area of OE&FS provides customer service to all of MDIT regarding human resource activities by working closely with Civil Service as well as MDIT Managers and Human Resource Liaisons.

Administrative Services (AS)

AS is responsible for implementation, management and control of such items as MDIT's vehicle fleet, employee travel, as well as policies and procedures.

Human Capital Management (HCM)

HCM provides programs and services to ensure MDIT attracts, supports and retains a high performing workforce.

Financial Services

Budget

Budget is responsible for working with the State Budget Office, state agencies and the legislature in developing the appropriated budget each fiscal year for MDIT. This area of OE&FS works together with the agencies to implement, track and project the activities within the budget during the fiscal year.

Palmer Giron
Director, Office of Employee and Financial Services

Accounting

In partnership with DMB, this area of OE&FS provides invoicing, accounting, financial systems security, payment processing, quarterly financial reporting, financial projections, required annual federal reporting (OMB A-87) and year-end closing services to MDIT programs.

Billing Services

Billing Services provides invoice audit and core billing activities for Telecom and Data Center Services, analyzes and inputs production invoice information into billing interfaces for client billing, develops and maintains billing interfaces in MAIN and provides billing analysis tools and Web-presentation of billing data for customer access and analysis.

Rate Development and Infrastructure Services

This function of OE&FS provides financial analyses and cost modeling for existing and proposed MDIT services. It also assists MDIT management with rate establishment, budget development, long-range financial planning and agency cost related to MDIT Infrastructure Services.

Facilities Management

Facilities provides the guidance and direction for effectively utilizing state resources as it relates to providing office space for our employees.

Asset Management

The IT Asset Management (ITAM) effort gives MDIT the ability to accurately discover, track and manage all IT assets under MDIT's control throughout their lifecycle, from within a single, central Asset Management data repository.

Audit Services

In partnership with the SBO, MDIT's internal audit function assists the MDIT director in ensuring adequate and appropriate internal controls in all aspects of operation. The external audit function provides coordination for all external audits.

Goals and Objectives

OE&FS is responsible for many of the key strategies and actions in Michigan's IT Strategic Plan for making the Michigan Department of Information Technology a great workplace. A number of goals and related objectives are outlined below.

Goal 1: Create opportunities to better understand customer needs and enhance accountability

Whether it is the Department of Natural Resources, the Department of Community Health or any of the other state agencies we serve, our clients want an easy and simple way to pay for the IT services they receive–and they want to understand what they are paying for. That is exactly why our vision is to develop rates and simplify billing for all of the department's services. The vision for rate development and simplification includes the following objectives:

- In partnership with client agencies, enhance the budget planning process
- To improve accountability, design and implement a budgetary tracking and financial reporting system
- To improve customer satisfaction, simplify invoices and increase accessibility to data reporting
- Expand Asset Management to include additional financial functionality and add additional assets to the ITAM Repository

K Employee & Financial Services

Goal 2: Workforce: Recruit, retain and recognize a diverse, high-performing technology workforce

Employees are the most important part of the organization. We are taking steps to reach out to find, attract and hire the best qualified employees. Investing in employees, and effectively managing the human resources process, is vital to organizational success as we strive to make MDIT the best workplace possible. Looking to the future we are focusing on workforce planning and succession planning programs. These programs are intended to keep us well-positioned for the future. Objectives and related strategies include:

- Attract and retain a competency-based, high-performing workforce: Develop a modern, ongoing recruitment program including an MDIT brand identity
- Work with Civil Service to streamline the selection process and decrease the time it takes to fill positions
- Engage in succession and workforce planning
- Partner with Civil Service to modernize and standardize the classification and pay structure for IT professionals to support attracting and retaining a high performing IT workforce
- Enhance our recognition and award programs

Goal 3: Workplace: Establish standards and procedures requiring and equipping a high-performance workforce

Employees make organizations thrive and it is no different in a state government IT organization. Our employees allow us to find innovative and fresh solutions to the state's challenges. Investing in employees and providing opportunities to work with and meet other employees both at work and outside of the office is vital to organizational success. Objectives and related strategies include:

- Implement best practice workplace tools and technologies and provide a work environment that challenges IT professionals and leverages their expertise
- Provide team-building activities and more opportunities for employees to get to know each other and work together more effectively

Goal 4: Workforce Development: Support, enable and help drive Michigan's IT plan goals and strategies through our IT workforce

The Department uses a professional development strategy to support employees throughout their career. The strategy is centered on the identification and use of critical job roles, competencies and curriculums and the joint development of individual development plans by managers and employees. Training is available via internal and third party resources both in person and online. Managers use centrally designed Leadership Curriculum and the results of their annual 360 review process to identify the skills needed. This area also partners with project teams to assist in development of employees as they transition from one technology to another. Objectives and related strategies include:

- Provide relevant and timely technical, behavioral, project management and certification training opportunities; to foster department-wide innovation and excellence
- Mature our management capability around best practice standardized IT processes to advance efficiency and effectiveness across the enterprise.; including strategic portfolio/contract management, systems development lifecycle, Application Portfolio Management and the Information Technology Infrastructure Library (ITIL)
- Enhance leadership development opportunities for formal and informal leaders

Goal 5: Vision & Values: Support a culture where employees take pride and responsibility for delivering exceptional service

Constantly striving to improve employee engagement and involvement is a key goal of OE&FS. We help encourage a better and more enjoyable workplace by emphasizing the statewide values and delivering programs that help highlight their importance. We believe a focus on improving the way we do business has a significant impact on the workforce. Objectives and related strategies include:

- Support a culture of integrity, innovation, accountability and excellence within MDIT that guides our daily behavior and decision-making
- As stewards of the public trust, state IT employees will be properly trained to protect both physical and information assets
- Continue to enhance and administer the annual MI-360 to provide leaders with an opportunity to receive feedback and to make improvements
- Participate in the annual State of Michigan Vision & Values survey and utilize the results to promote shared statewide values: integrity, excellence, inclusion and teamwork

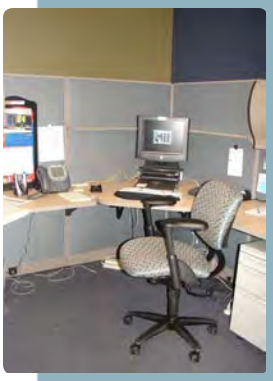
Employee Services Projects

Employee Services provides customer service to all of MDIT regarding human resources, facilities, vehicle fleet and administrative policies by working closely with MDIT managers/employees and human resource liaisons. Several of the most noteworthy projects include:

PD Standardization Project

Implement standard position description templates to ensure consistent and current job roles and duties are identified for all MDIT employees.

- Standardize position description format and content
- Validate and update current job roles/duties



Office Space Consolidation Project

Several facilities projects are being undertaken to produce cost savings and leverage resources.

- Child Support Enforcement staff move
- E-Michigan staff move
- Application Services and Operations staff consolidation

One Great and Super 8 Innovation

A program to identify and implement process improvements based on employee input.

- Create a survey for all employees to identify eight processes to re-engineer
- Identify and implement process improvements for one great process
- Identify and implement eight small-scale processes based on employee feedback

Human Capital Management (HCM) Projects

This area is focused around programs and projects designed to Select the best people... get them up to speed quickly... and, help them contribute more and stay longer. The area is involved in a number of support and development activities such as providing individual leadership coaching and counseling to leaders, providing leadership development opportunities and new employee orientation. A few of the most promising projects in this area include:

Great Work Place Campaign

A renewed effort is being placed on making the Michigan Department of Information Technology (MDIT) an even better place to work and to empower employees to become more involved as partners in the transformation of state government. This will be a long-term effort across the department. Activities include:

- Creation of an action team of MDIT front-line employees to identify and prioritize great workplace initiatives, assess needs, suggest and implement solutions, and assist with measuring the success of their efforts. Resources will be selected from all levels and all functional areas of the Department.
- Annual administration of the MI 360 evaluation process across MDIT as a useful tool for leaders to gain feedback about their strengths and weaknesses through anonymous employee feedback. MI 360 enhances communication between managers and employees and helps managers better understand their management styles and behaviors to improve productivity in our workplaces.
- Development of the "Executive Connection" initiative whereby top leadership within MDIT will spend time doing the job of front-line employees to better understand employee concerns and issues. The CIO will participate in this effort.
- Coordination of team-building events which will include a department-wide picnic, department golf outing, on-line charity auction, cancer walk/run, afternoon at the minor-league baseball park, employee appreciation week and numerous other events focused on building the MDIT culture of teamwork.
- Creation of an MDIT governance team focused on empowering employees and driving decisions down to the lowest possible level in the organization. This team will focus on the leadership meeting structure within the department, as well as the communication flow between levels of management. Strategic and political issues will remain with the executive leadership, but employees must be empowered to make decisions on day-to-day operational issues.

Student Programs

To foster and develop the department's young talent, the Student Intern Program reaches out to universities and community colleges around the State to recruit students, while securing specialized training and developmental opportunities for the existing MDIT student talent pool.

Informal Leader Program

Informal Leaders play a leadership role on teams, special projects and committees even though they are not currently in a Civil Service supervisory or managerial classification.

The Informal Leadership Program helps develop leadership skills for personal and future career opportunities. However, the program also provides skill enhancement that can be applied immediately. There is no timeline for this program; it is primarily self-paced with several touchpoints with HCM staff.

- The program requires a self-assessment to help them discover if they really want to be a leader, then each participant submits an application documenting why they want to be a leader
- Applicants are interviewed upon entry into the program and a set curriculum of online courses is prescribed to help them develop competencies required by new leaders
- This new program has been well-received; over 50 employees have already participated

New Leader Development Program

This program is designed for all new MDIT leaders. It is highly customized to meet the individual development needs of each participant. This program serves individuals becoming formal leaders for the first time, MDIT leaders taking on a greater role, leaders entering MDIT from other state agencies or outside state government. One of the most unique characteristics of the program is that throughout the program each leader has personal access and regularly scheduled sessions with HCM staff to help ease their transition to management and become a more effective leader.

- Upon appointment, each new leader is formally welcomed to MDIT leadership by the director and the HCM area, where they are asked about their background and provided with an orientation about leadership within MDIT
- New leaders have a Needs Assessment session with their Manager which is used to create a Customized Leadership Development Plan
- Leaders get specialized training in Employee Services/HR, MDIT Finance and Budgeting, Contracts and Procurement, Internal Controls/Risk Overview and Management Fundamentals
- Each new leader meets regularly with HCM staff

Established Leader Program

This leader development track is for MDIT leaders recognized formally by Civil Service. It includes a set of both recommended and optional development opportunities. It also stresses that they work with their direct supervisor to create an individual development program that matches both their needs and the needs of the organization. The leader program helps leaders to:

- Regular communication from HCM, centered on enhancing leadership skills through a variety of opportunities
- Leaders use their annual 360 results to help focus their developmental opportunities
- Attend a technical/professional workshop or conference
- Attend mandatory MDIT Leadership Training such as Coaching, Leadership Essentials, Building Trust or Behaviorally-Based Interviewing
- Leaders also take advantage of leadership consulting services offered by Human Capital Management

Financial Services Projects

Budget & Financial Reporting Project

- Implement a financial reporting tool set to provide MDIT management with more timely financial reporting information beginning with FY 2009
- Provide MDIT Management with ready access to financial information to support decisions
- Enhance financial and budgetary project-reporting capabilities by 2010

Invoice Delivery Enhancements

- Simplify presentation of MDIT invoices for FY 2008
- Provide enhanced delivery methods of invoice and usage data
- Provide tools and training to clients for invoice analysis

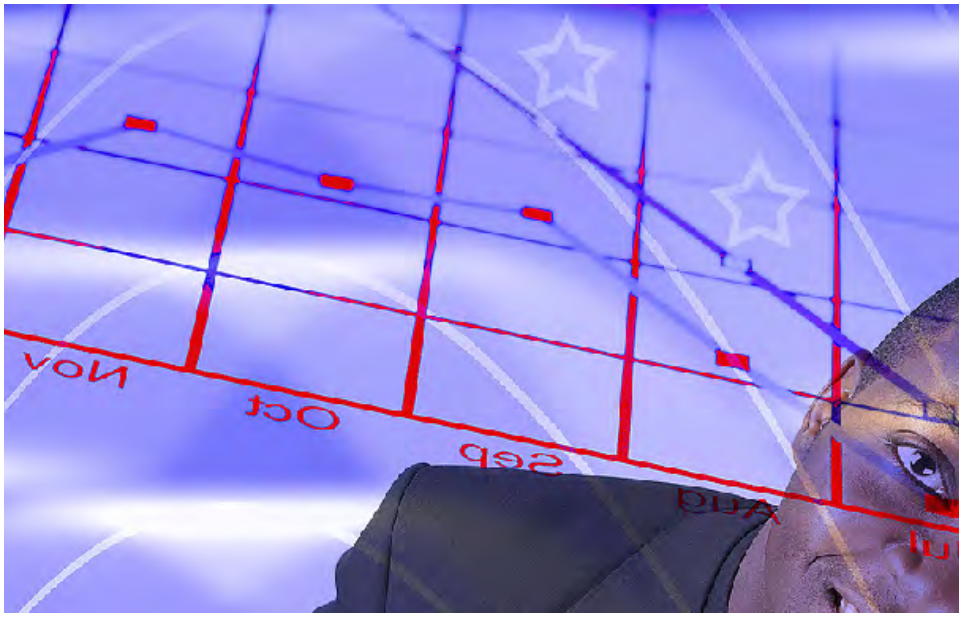
Audit Projects

- Managers will receive enhanced training on audit requirements and their role in the audit process, such as Federal Information System Controls Audit Manual (FISCAM) and the Internal Control Evaluation (ICE) beginning with FY 2008
- Enterprise Service Team (EST) Core Team members will report on the status of implementation of corrective action items resulting from audit findings
- Enhance effort to proactively work with MDIT management and the Office of Auditor General (OAG) to address audit concerns

Asset Management Projects

ITAM gives MDIT the ability to accurately discover, track and manage all IT Assets under MDIT's control throughout their lifecycle, from within a single, central Asset Management data repository.

- Conduct a computer leasing pilot beginning in FY 2008
- Incorporate capital asset schedules into the ITAM repository in order to streamline accounting processes and enhance capability to report on IT assets, beginning in FY 2008



Metrics and Measures

Our measures of success are dependent on feedback from our customers and employees. The specific projects included in our Metrics and Measures will provide an additional baseline for measurement of our progress toward our identified goals.

Goal 1: Create opportunities to better understand customer needs and enhance accountability

- Budget planning process enhanced for the 2010 budget cycle
- Budgetary tracking and financial reporting system implemented in 2008
- Invoices simplified and customer accessibility to data reporting increased in 2008
- Asset Management expanded to include additional financial functionality and add additional assets to the ITAM Repository by 2008

Goal 2: Workforce: Recruit, retain and recognize a diverse, high-performing technology workforce

- A modern, ongoing recruitment program including an MDIT brand identity developed in 2008
- Succession and workforce planning strategy implemented by 2010
- Partner with Civil Service to modernize and standardize the classification and pay structure for IT professionals to support attracting and retaining a high performing IT workforce (Ongoing)

Goal 3: Workplace: Establish standards and procedures requiring and equipping a high-performance workforce

- Best practice workplace tools and technologies implemented (Ongoing)
- Team-building activities and other opportunities for employees to get to know each other and work together more effectively provided by 2009

Goal 4: Workforce Development: Support, enable and help drive Michigan's IT plan goals and strategies through our IT workforce

- Technical, behavioral, project management and certification training opportunities provided by 2009 and ongoing
- Mature best practice standardized IT processes including strategic portfolio/contract management, systems development lifecycle, Application Portfolio Management and the Information Technology Infrastructure Library (ITIL) implemented by 2010
- Leadership development opportunities for formal and informal leaders enhanced in 2009

Goal 5: Vision and Values: Support a culture where employees take pride and responsibility for delivering exceptional service

- A culture of integrity, innovation, accountability and excellence within MDIT is supported that guides our daily behavior and decision-making (Ongoing)
- State IT employees properly trained to protect both physical and information assets (Ongoing)
- Continue to enhance and administer the annual MI-360 to provide leaders with an opportunity to receive feedback and to make improvements (Ongoing)
- Participate in the annual State of Michigan Vision & Values survey and utilize the results to promote shared statewide values: integrity, excellence, inclusion and teamwork (Ongoing)

Cross-boundary Solutions & Partnerships

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Cross-boundary Solutions & Partnerships

Vision of Action

The Office of Technology Partnerships (OTP) is a division of the Michigan Department of Information Technology (MDIT) created to foster technology collaboration and partnerships with business, K-12, universities, non-profit organizations and local units of government.

Collaboration and partnerships within, and outside, an IT organization are vital in building efficiencies, better services and to the overall success of the organization. This collaboration and partnering must be done in a strategic sense, to find win-win situations for all parties involved. OTP has a clear vision for the future that can be categorized into the following four major focus areas:

- Public Partnerships: Create innovative partnership programs for more effective and efficient government across all levels
- Public/Private Partnerships: Strengthen and expand partnerships beyond government to the private sector and higher education
- Technology: Leverage existing and emerging IT infrastructure and functionality across the state
- Health IT: Expand health information technology and health information exchange programs and partners

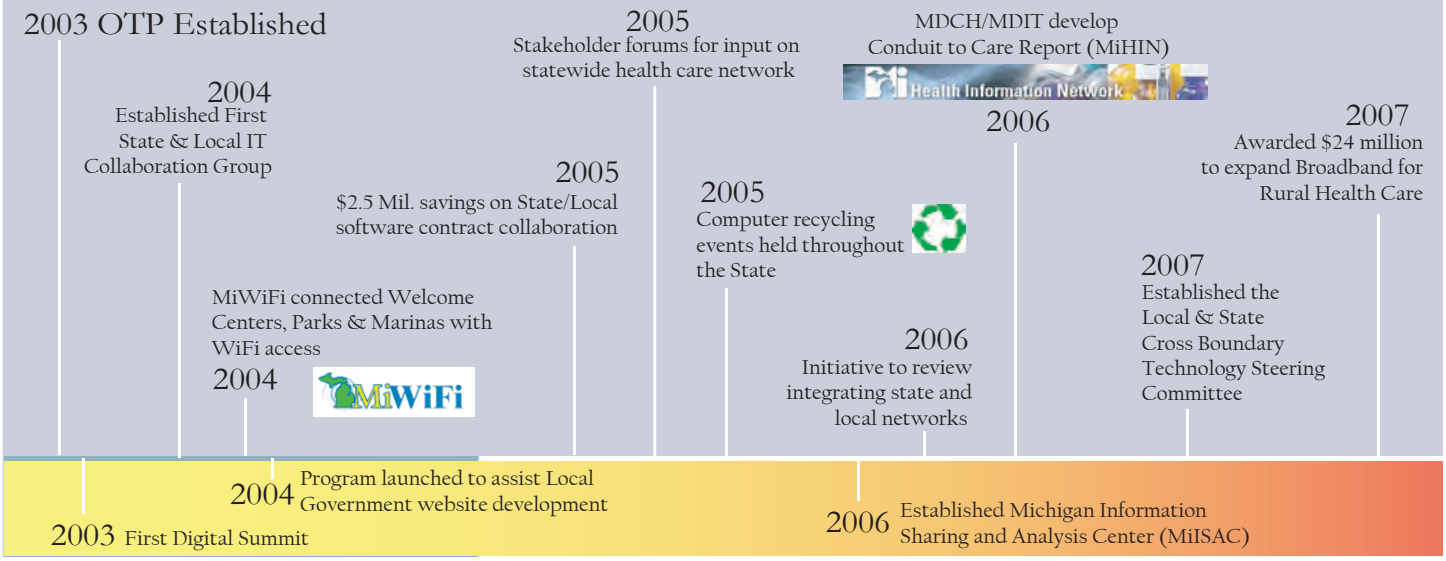
This process of collaborating and partnering has taken different forms over the last four and a half years. The following section gives an overview of that evolution and how we contribute to collaboration and create external partnerships today.

Overview

Over the past few years, the Department of Information Technology has made it a goal to foster partnerships that will help drive innovation and better government. In the following Appendix you will find detailed examples of programs and partnerships that exist today that are both internal and external to state government. These programs and partners interface with the state through many different offices, divisions or agencies.

In some cases, with an organization the size of state Government, collaboration is achieved by pulling together resources from different areas to represent each division within the organization. These representatives meet to help shape the direction and guide strategic planning to meet business needs and demands.

Office of Technology Partnerships (OTP) History



Also, with the growing responsibility to find more efficient ways to offer services, along with expanding the availability of those services, it has become necessary for state and local governments to work across government boundaries. Citizens are looking to government to become more like the private sector; they want to be able to go to one place and get all the services they need. For example, if a citizen wants to start a business in their local community they would like to be able to find all the forms, permits and resources they would need to start that business in one place. Furthermore, that information is increasingly being requested electronically and readily available 24/7/365. Citizens are not concerned with who is responsible for getting them the information they need, only that they can get it when and where they need it.

State and local agencies, who are customers of information technology (IT) departments or customers of IT consultants, are also experiencing the need to find innovative ways to offer and receive IT services. They are increasingly looking to IT departments and consultants to offer innovative solutions to find cost savings and increase availability of services.

Michigan is fully engaged in using technology as a change agent for cross-boundary innovation. Whether through a local and state cross-boundary technology steering committee, a network of healthcare professionals, or a group of vendor partners, MDIT is using its partners to help identify and solve difficult issues that cross organizational boundaries. We will continue to expand this network of partners and identify new initiatives that will aid the state of Michigan and our partners in delivering better services to customers and citizens.

Goals and Objectives

Since its inception, the Office of Technology Partnerships has focused on developing relationships with entities outside the executive branch of state government. These partnerships have enabled the development of cross-boundary solutions to help build a better government, and offer better services to our customers and citizens alike. Our goals and related objectives are outlined below.

Goal 1: Public Partnerships: Create innovative partnership programs for more effective and efficient government across all levels

Fostering lasting relationships is a priority for OTP, and is the stepping stone for finding efficiencies within state and local government. These efficiencies lead to reduced spending, quicker and better quality services and more availability of services in general. These relationships, to be successful, must demonstrate a win for all parties involved. Over the past four and a half years, OTP has entered into many of these partnerships and we look forward to continuing it into the future. Some of those on the horizon include:

- Further evolve the local and state government CrossBoundary Technology Steering Committee to develop policies, procedures and funding facilitating initiatives among all levels of government
- Identify five initiatives for the CrossBoundary Technology Steering Committee
- Implement infrastructure, application and resource sharing between government levels, where appropriate, to reduce costs and provide better services

Goal 2: Public/Private Partnerships: Strengthen and expand partnerships beyond government to the private sector and higher education

Expanding our relationships beyond traditional governmental boundaries is a key aspect of the work OTP does on a daily basis. Expanding our reach to other public entities and including experts from the private sector helps the Department think beyond its borders. Whether it is making sure contracts are extended to local units of government or schools or validating strategic direction with private sector vendors, OTP is dedicated to bringing together all the necessary organizations to find efficiency.

The following are ways in which we will continue to grow in this area:

- Research the feasibility of a partnership with the private sector to build a state-of-the-art data center that not only fulfills our mutual capacity needs, but also provides an economic development opportunity for Michigan
- Continue to develop and foster strong, strategic vendor relationships
- Enable real-time mashup between state and local government, as well as private sector, information

Goal 3: Technology: Leverage existing and emerging IT infrastructure and functionality across the state

Many organizations may be sitting on assets that can create efficiencies for themselves and others and not even know it. In the past, organizations have leveraged excess fiber, unused or underused servers, extra software licenses and more. Furthermore, there may be new, emerging technologies that need to be put on the radar of organizations to look into implementing, to save money or offer better services. These technologies can sometimes prove to be expensive or complicated, but with the right mixture of partners can become easy and cost effective to implement. Some areas we will look at include:

- Work with partners to increase broadband coverage and adoption rates with a new, interactive Web site and by holding awareness/information activities throughout the state
- Provide a resource for local communities and vendors to obtain grant and loan information, facilitating the expansion of telecommunication infrastructure into undeserved areas of Michigan
- Further reduce travel by expanding the use of videoconferencing and Web conferencing throughout all levels of government

Goal 4: Health IT: Expand health information technology and health information exchange programs and partners

For nearly two years, Michigan has been working to create a Michigan Health Information Network. Many strides have been made to pull together the right group of stakeholders around the state to make the vision a reality. The items listed below are a short list of things OTP hopes to help accomplish in the future to continue Michigan down the road to statewide health information exchange:

- Coordinating with the Department of Community Health and the Michigan Public Health Institute, successfully implement the $24 million award from the FCC to connect over 390 rural hospitals and medical clinics via broadband
- Assist health information exchanges (HIE) with planning and implementation strategies and support
- Provide HIEs with recommendations, privacy and other standards and best practices on health information technology

Internal Stakeholders

Michigan Information Technology Executive Council (MITEC)

MDIT has established the Michigan Information Technology Executive Council (MITEC) as a further extension of MDIT's responsive, partnered and accountable commitment to providing quality services to its clients and customers. The purpose of MITEC is to advise and assist the state chief information officer (CIO) and MDIT in addressing current business, service and technology support needs, as well as to develop longer-term information technology goals and strategic and tactical direction for the state of Michigan. The council is directly involved in IT support and service priority setting, planning, resource alignment and budgeting activities.

Authorization

MITEC was established by the state CIO, based on existing Executive Order (EO) authority, including EO 2001 – 3.

Purpose and Objectives

MITEC is an advisory body to the state CIO in the planning, development, implementation, and management of state government-wide, as well as department, IT services and solutions. These responsibilities include providing advice on the development of Michigan's long-term information technology vision and goals, and enterprise IT strategic and tactical direction and priorities. MITEC provides a leadership forum and governance structure for discussing issues that have common or universal interest for the executive branch agencies, as well as the legislative and judicial branches.

MITEC's responsibilities include identifying business and customer service needs, assisting MDIT in providing responsive and timely services and developing and recommending strategies and actions to the CIO for guiding enterprise and MDIT support of department missions and business, management and customer service needs. MITEC is a forum and environment where agencies may surface their IT-related issues to ensure that those issues are acted upon in a responsive and timely manner. MITEC also fosters a better understanding among public officials, administrators and staff of the role of information technology and its proper relationship to agency service provision and management, and how it can make significant contributions to the improvement of the administration of state government for the benefit of the general public.

How MITEC Fulfills this Responsibility

Agency and state service needs, MDIT support and responsiveness

- Serve as a customer advisory/coordinating body to the CIO and MDIT.
- Assist MDIT in identifying critical statewide and agency-specific IT service and management issues and collaboratively identify, develop and implement solutions

Enterprise vision, goals, strategies, priorities and policies

- Advise on the development of Michigan's long-term information technology vision and goals
- Advise and assist the CIO in setting the enterprise IT strategic and tactical direction and priorities, in congruence with department business and service needs
- Assist in defining and supporting IT-related standards, policies and procedures including, but not limited to, enterprise architecture, security and procurement

Planning, resource alignment and budgeting

- Assist and participate in the development of an enterprise / agency integrated IT planning and budgeting process and a state information technology strategic plan integrated with agency business and IT plans
- Participate in the development, submission, passage and implementation of the enterprise IT budget in alignment with agency budget development, submission, passage and implementation
- Strive to develop a consensus and an integrated IT business case among agencies before presenting or submitting IT-related proposals through the budget and other decision-making processes

Membership

The state CIO chairs MITEC with the membership consisting of deputy directors, administrative officers or comparable level executives or administrators from each client department; three representatives from the legislative branch (House, Senate and Legislative Services Bureau); and one from the judicial branch.

Business Sessions and Meetings

MITEC meets at least four times per year for regular business sessions and may convene periodically for ad hoc meetings on specific topics.

Decision Making

Recommendations to the CIO are made by consensus of those present at each meeting. If consensus cannot be reached, the pros and cons of opposing arguments will be documented in writing to the CIO.

MITEC Subcommittees

As part of MITEC, subcommittees have been formed that are specific to certain areas. These subcommittees are responsible for addressing issues and making recommendations on a statewide basis.

Standing subcommittees include:

- IT Security
- IT Standards
- E-Grants

Other ad hoc subcommittees are formed on an as needed basis.

For additional information on the Michigan Technology Executive Council (MITEC) visit: www.michigan.gov/mitec

External Collaborative Partners

Local/State Government Technology Steering Committee

We are building a cross-boundary program that is structured, sustainable and leverages existing infrastructure, applications, processes and resources. Michigan's cross-boundary collaboration journey began with the establishment of a steering committee comprised of local and state government IT directors and associations. The committee is co-chaired by local government IT directors.

Vision:

Through technology, reinvent all levels of government to be more efficient and effective.

Mission:

Transform government with IT being the catalyst and fostering collaboration across government lines. We will do this by sharing resources to eliminate duplication of effort and reduce costs.

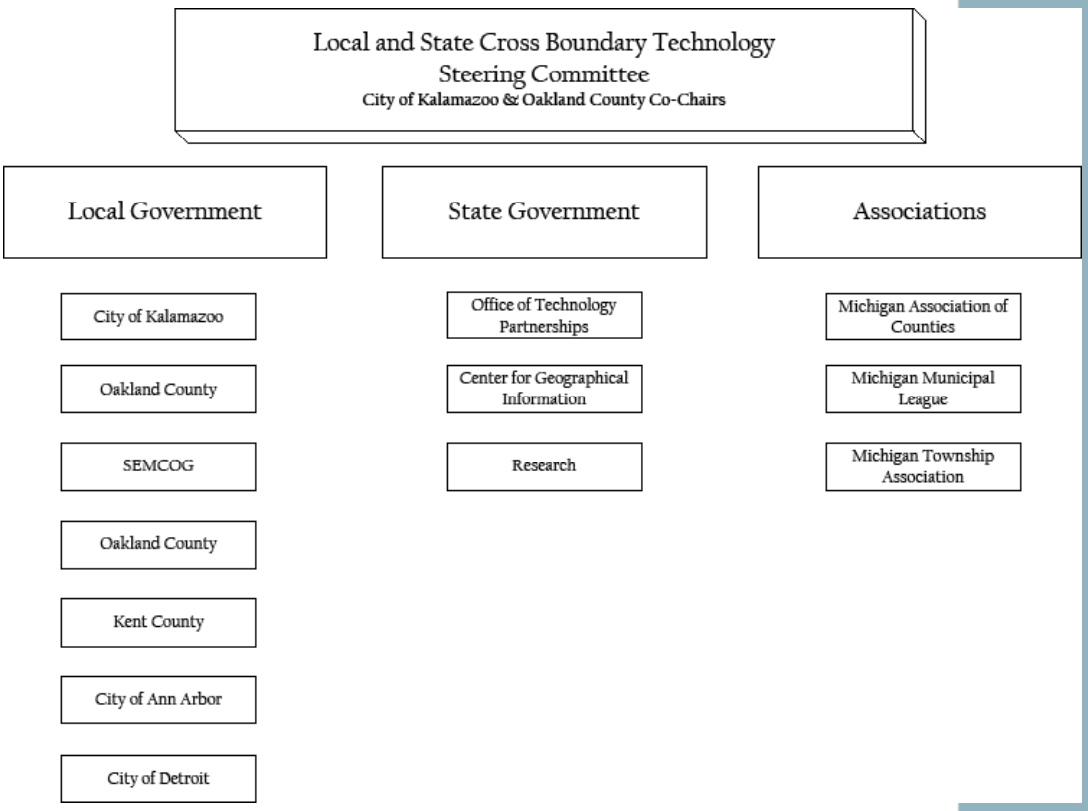
Our goal is to:

- Build once
- Serve many
- Operate as one unit
- Have a single entry point
- Reduce costs
- Provide better and more services to citizens
- Make crossing government lines seamless

The program's Steering Committee is working to:

- Develop strategies and policies across tiers
- Identify unique opportunities/barriers, stakeholders and incentives
- Identify shared business processes
- Develop ways to allocate resources and share costs
- Communicate opportunities and strategies to peer organizations

For additional information on the Steering Committee and/or its current and future initiatives please visit our Web site at: www.michigan.gov/dit



Michigan Health Information Network (MiHIN)

The state of Michigan has placed a priority on its goal to use information technology to drive quality improvements and efficiency in Michigan's health care system. The Office of Technology Partnerships has been working in conjunction with the Department of Community Health to accomplish this goal by accelerating the adoption and use of health information technology (HIT) and health information exchanges (HIEs).

A conduit to care report was developed with the collaboration of 200 Michigan health-care stakeholders who volunteered their time to participate in the MiHIN Steering Committee and six workgroups.

The report was created to provide a strategic roadmap for all e-health initiatives for the state and to convene Michigan's healthcare stakeholders to speed the adoption of health information technology and promote health information exchange. To view a copy of the full MiHIN "Conduit to Care" report visit: michigan.gov/mihin

Michigan has been divided into nine regions, or what we refer to as Medical Trading Areas (MTAs), based on clusters of where healthcare is provided. Each area is in the

process of creating a regional health information exchange to share health information with each other and up to the state and national levels.

The MiHIN Resource Center will provide guidance, direction and coordination to regional and statewide health information exchange (HIE) initiatives in the state. It will represent HIE regional efforts at the state and national levels, promote adoption of standards and identify resources to enable HIE organizations to achieve their goals.

The state of Michigan appropriated $4.5 million to be used to plan and implement health information exchanges and health information technology in Michigan over fiscal years 2007 and 2008.

- $3.5 million was allocated to the Medical Trading Areas (MTA)
- $1 million was allocated to the Michigan Resource Center

The state of Michigan has also recently been awarded $21 million from the Federal Communications Commission (FCC) to construct rural broadband networks to support rural telemedicine. Michigan is working with healthcare stakeholders statewide to plan and implement this award.

For additional information on the Michigan Health Information Network please visit www.mihin.org

Local Government Web site Program

University Students creating Web sites for local units of government

Thanks to a collaborative effort between OTP, the Michigan Township Association, the Michigan Municipal League and several state universities, more and more Michigan municipalities are now online with their own Web sites.

University students and professors work in collaboration with their assigned local unit of government to develop each Web site at no cost. The program is a win for everyone, allowing the students to showcase and apply their talents, giving the local units of government their desired Web presence and affording constituents with a new and more convenient way to obtain information.

In just under three years, the program created over 80 Web sites at no cost to Michigan local units of government.

Local units of government creating their own Web sites

OTP also has worked with university interns to develop a, "Local Government Web Development Template," available for local units of government to use to create a Web site on their own.

The template allows municipalities to independently construct and maintain their own Web sites on their time schedule. This template can easily be populated and managed by a non-technical individual with minimal knowledge of Web design.

For additional information, or to inquire about how you can participate, please visit the Office of Technology Partnerships Web site at: www.michigan.gov/dit

Broadband in Michigan

Like electricity and roads, broadband has become the essential 21st century utility for the citizens of Michigan to carry out everyday tasks. Whether it is running a business, working from home, utilizing online government services or just chatting and checking email, having a connection to the Internet has become a necessity for most citizens. Unfortunately, not all Michigan citizens have the same services available to them in their communities, and many do not understand the importance of having a broadband connection in the home. OTP has been working to identify where broadband is underserved in the state of Michigan, and ways in which we can help raise the awareness of the importance of a home being connected via a broadband connection. From research done to date it is apparent that, as communities become more rural, there is a decline in services available. Additionally, there are also "pockets" of underserved areas present throughout the state.

The governor and MDIT are working to expand traditional broadband services into underserved areas by increasing awareness and adoption of existing services, and educating community leaders and members about the importance of a broadband connection. Broadband is vital because it represents the next tool to improve a community in multiple areas, including:

- Tourism
- Education
- Health Care
- Public Safety
- Government Services
- Economic Development

It has become apparent that there is no single solution to get traditional broadband to every Michigan household. OTP has begun working with multiple counties and local associations around the state to help address the need and desire to expand traditional broadband coverage throughout their respective communities. In addition, OTP has resources available to local communities interested in developing a broadband strategy, as well as information on other local governments that have taken on the broadband issue across Michigan.

To access those resources, or to learn more about OTP's broadband initiatives, please visit the Office of Technology Partnerships Web site at **www.michgan.gov/dit**

Geographic Information Systems (GIS) Partnerships

MDIT's Center for Geographic Information (CGI) has developed relationships with several local units of government to share geographic information. Two forums that have been established are the Michigan Geospatial Steering Committee and a monthly GIS Users meeting These forums have been very effective and allow sharing of knowledge, information and expertise across local and state governments.

The Michigan Geospatial Steering Committee is composed of various leaders from the Michigan geospatial technology community. The mission of the Committee is to create initiatives and follow through on the resulting projects designed to drive down costs, reduce redundancy and create greater efficiencies in the use of geospatial technology by the citizens of Michigan. Initiatives are based on cooperation, communication and the sharing of knowledge and expertise. These expand the use of GIS by creating an ease of entry for those that don't currently use GIS and creating trust among those that do. Membership includes:

- Co-Chairs from Oakland County and Grand Valley State University
- Southeast Michigan Council on Governments (SEMCOG)
- City of Holland, Michigan
- Michigan State University
- Michigan State Police
- Michigan Department of Information Technology

The CGI Monthly GIS Users Meeting is a standing, open meeting the first Thursday of each month. This meeting has been conducted for past 15 years with the primary purpose of geographic information sharing. The meeting has regular attendance from a cross section of state, federal, local and private organizations. Meeting minutes are kept and posted to the CGI Web site. There are currently 200 subscribers on the group's distribution list.

For additional information on either of the forums refer to: www.michigan.gov/cgi

MPSCS Advisory Board

In April 2005, Governor Jennifer Granholm issued Executive Order No. 2005-8, which established a new Michigan Public Safety Communications System Advisory Board. The board was created to seek active partnership among local, state, tribal and federal public safety agencies. The governor saw the need for all public safety agencies to be prepared to assist each other, regardless of jurisdiction, in the event of an emergency or natural disaster. The board consists of 19 members, nine of which are local emergency first responders appointed by the Governor for four year terms. The remaining ten members are from various State agencies and specific State officials.

The board is staffed and assisted by MDIT. It has the authority to request public participation when it deems it necessary. It may also make inquiries, conduct studies, conduct investigations, hold hearings and receive comments from the public. The board can hire contractors, subcontractors, advisors, consultants and agents, and enter into contracts to help it exercise its powers. The board can accept donations of labor, services or other things of value from any public or private agency or person.

The board meets at least once a quarter and is charged to advise the governor and MDIT in many areas including:

- Best practices for implementing interoperability of wireless public safety communications, including data, in Michigan on a local, regional and statewide basis.
- Future trends in public and private sectors relating to public safety wireless communications, interoperability standards and technology in support of providing public safety wireless services in the most effective and efficient manner.

- Opportunities for effectively using the MPSCS as part of local, regional and statewide mutual-aid agreements, 9-1-1 dispatch operations and incident command systems.
- Best practices for using interoperability training on a local, regional and statewide basis.
- Development and implementation of the interoperable communication plan.

For additional information refer to: www.michigan.gov/mpscs

Metrics and Measures

The success of our initiatives, as with all of MDIT's services, is dependent upon feedback from our customers and stakeholders. The following measures will help us gauge our progress.

Goal 1: Public Partnerships: Create innovative partnership programs for more effective and efficient government across all levels

- Identify five initiatives for the Cross Boundary Technology Steering Committee in 2008
- Implement five initiatives for infrastructure, application and/or resource sharing between government levels, to reduce costs and provide better services by 2009

Goal 2: Public/Private Partnerships: Strengthen and expand partnerships beyond government to the private sector and higher education

- In 2008 provide MDIT with a draft report on the feasibility of a partnership with the private sector to build a state-of-the-art data center
- Enable real-time mashup between state and local government, as well as private sector, information by 2012

Goal 3: Technology: Leverage existing and emerging IT infrastructure and functionality across the state

- Create a new, interactive Web site in 2008 to support work with our partners to increase broadband coverage and adoption rates
- Hold awareness/information activities throughout the state to support work with our partners to increase broadband coverage and adoption rates by 2010
- Provide a resource for local communities and vendors to obtain grant and loan information, facilitating the expansion of telecommunication infrastructure into undeserved areas of Michigan in 2008
- Expand the use of videoconferencing and Web conferencing throughout all levels of government in 2009

Goal 4: Health IT: Expand health information technology and health information exchange programs and partners

- Coordinating with the Department of Community Health and the Michigan Public Health Institute, successfully implement the $24 million award from the FCC to connect over 390 rural hospitals and medical clinics via broadband in 2011
- Provide HIEs with recommendations, privacy and other standards and best practices on health information technology in 2008

Statewide Radio Communication

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Statewide Radio Communication

Vision of Action

The State of Michigan works diligently to provide access to a statewide public safety communications system for all Michigan public safety agencies. We strive to provide the ultimate in both inter-agency and intra-agency interoperability and facilitate cost-effective implementation and utilization of new communications technologies for those agencies.

The Michigan Public Safety Communication System (MPSCS) provides state-of-the-art communications using advanced technology based on nationally- recognized standards contained in the Association of Police Communications Officers (APCO) Project 25 specifications. As a leader in standards-based public safety interoperability, it is essential that the MPSCS stay current with new and important life-saving technologies. The ability to share information on demand and in real time, whether it is voice or data, is critical to the first responder.

The function of any public safety communications system is to assure rapid response and cooperation of emergency personnel. The MPSCS achieves this through statewide coverage and advanced technology, while remaining reliable and easy to use. System operation is monitored 24 hours a day to ensure that the system remains ready to assist Michigan's first responders deal with any situation. The MPSCS is the primary communications interoperability solution for Michigan's public safety first responders.

Background

The MPSCS is a statewide radio communications system that:

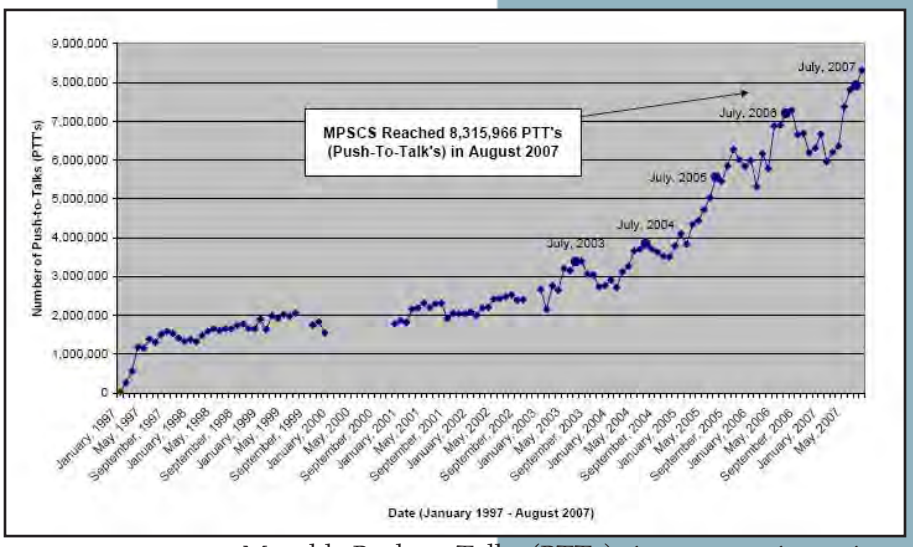
- Serves over 1203 federal, state and local public safety agencies
- Is comprised of 231 tower sites, over 20 integrated state and local public safety dispatch centers and a network communications center serving over 40,012 radios
- Provides 97% mobile coverage across Michigan
- Provides enhanced portable coverage within the counties of Monroe, Genesee and Macomb as well as within the city of Detroit

Starting in the mid-1990's, the state made a significant investment to provide statewide radio communication for first responders. While the MPSCS was originally implemented to serve the Michigan State Police, in recent years the Michigan Department of Natural Resources and the Michigan Department of Transportation have become reliant on the system. More importantly, over 900 local public safety agencies have now joined the MPSCS, accounting for 84% of the system's "Push-to-Talks" (PTTs).

Today nearly 75% of the radios on the MPSCS are local public safety agencies units. The MPSCS is robust enough to serve the needs of many more federal, state and local agencies. Local agencies find the MPSCS financially attractive and benefit by leveraging the state's investment. The MPSCS provides the interoperable communications essential to today's emergency responder. Smaller agencies many times only need to acquire radios to join the MPSCS. Larger agencies frequently add additional towers and devices to provide in-building portable coverage within their jurisdiction or to meet other special local needs.

Goal 1: Interoperability

The MPSCS provides local, county and statewide interoperability without the implementation of cumbersome interconnections between radio systems called patches. Because it is a standards-based shared system, any member of the MPSCS can speak with another member with the simple touch of a button, a feature that is already proven as a life-saving, safety-enhancing tool for the citizens and public safety officials of Michigan.



Monthly Push-to-Talks (PTTs) since system inception

The system's ability to expand and adapt to unique requirements permits it to accommodate the current and future interoperability needs of Michigan's public safety community.

Objectives:

- Continue to provide the highest level of interoperability for all first responders in Michigan
- Facilitate the addition of several thousand new radios by agencies awarded grant money
- Support initiatives for improving interoperability in southeast Michigan
- Support 911 dispatch center consolidation projects
- Support other forms of interoperability between the MPSCS users and public safety agencies still utilizing radio systems on analog mode or other frequency bands (Ongoing)

Goal 2: Outstanding Radio Coverage

The MPSCS provides 97% mobile radio coverage statewide. While there is no guarantee of portable radio coverage, many local agencies have enhanced the MPSCS by building and integrating additional radio infrastructure such as tower sites. This has significantly increased the MPSCS' portable radio coverage in southeast Michigan. The system's flexibility allows an agency wishing to achieve a specific level of portable radio coverage in its jurisdiction to add additional sites or other coverage-enhancing facilities. The system's adaptability allows various approaches to coverage enhancement.

Objectives:

- Continue system enhancements to expand and improve mobile radio coverage statewide
- Add new members
- Integration of the Washtenaw County radio system
- Improve coverage in the city of East Lansing by addition of radio infrastructure at the East Lansing tower site
- Integration of several new towers provided by local public safety agencies funded through Public Safety Interoperable Communications (PSIC) grant projects
- Expansion of the St. Clair County radio system integration project
- Work with various other counties to facilitate integration of their radio systems

Goal 3: Cutting-Edge Technology

The MPSCS has been recognized as being one of the nation's premier public safety radio communications systems. That recognition is based in part on the system's adoption of state-of-the-art technology.

The MPSCS utilizes the latest "digital trunked" technology. The system is also compliant with the Association of Police Communications Officers (APCO) Project 25 standards. These standards establish a common baseline of equipment specifications allowing various manufacturers to design and supply compatible radio equipment. The standards are continuously evolving to better meet the needs of public safety agencies.

Future MPSCS upgrades will include High Performance Data (HPD) capability. This will significantly increase the rate at which digital data can be transmitted over the system. It will also allow additional data features, including automated access to centralized databases.

Objectives:

- Replace aging equipment
- Offer the latest, proven technologies while maintaining compliance with established, recognized standards to ensure that the system never becomes technologically obsolete
- Maintain Project 25 compliance through the incorporation of new tested standards
- Expand data transmission and sharing capabilities
- Upgrade the MPSCS to add "high performance" data capabilities and integrate more advanced simulcast systems
- Pilot 700 MHz radio sites to provide access to additional interoperable spectrum
- Implement 700MHz voice channels and/or Project 25 TDMA standard

Goal 4: System Upgrades at No Cost to Customer

The state of Michigan is dedicated to keeping the MPSCS technology current. The system currently utilizes the Motorola ASTRO 25, Version 6.5 IP voice platform, a stepping-stone for future upgrades and enhancements. The system will adopt new technologies as new standards are developed.

For local public safety agencies, constructing a stand-alone system means the agency is responsible for upgrades – a process that can be costly and disruptive. By contrast, upgrades to the MPSCS infrastructure are currently installed free of charge to members; thus, users are provided the latest technology without the necessity of securing additional funds.

The MPSCS administrative and engineering staff remains dedicated to maintaining the system at the proven, forward edge of technology.

Objectives:

- Continue to provide upgrades of the infrastructure free of charge to members
- Upgrade of the MPSCS to Motorola's ASTRO 6.9 version software platform
- Expand the Interoperability Gateway Network to support both a strategic technology reserve and enhance system monitoring
- Develop and secure a funding strategy for future upgrades and "lifecycle" maintenance

Goal 5: Rebanding the MPSCS to New 800 MHz Spectrum

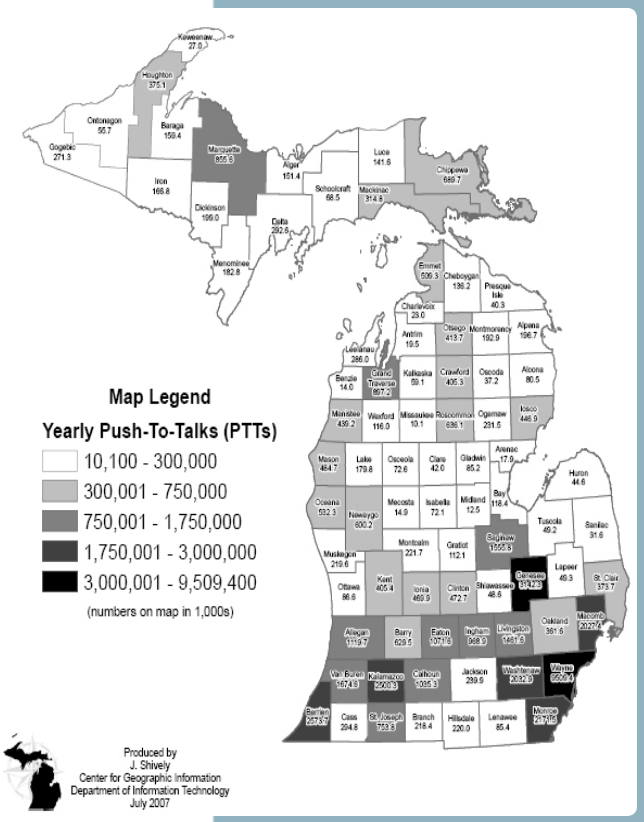
Several years ago, the Federal Communications Commission (FCC) responded to significant interference to public safety communications created by the introduction of cellular architecture systems into the commercial 800 MHz spectrum. After much public debate, the FCC issued an order for public safety agencies on the 800 MHz band, including the MPSCS, to relocate within the band. This relocation is separating the frequencies used by public safety and cellular-type systems to eliminate the interference.

This rebanding process includes the retuning of every radio on the MPSCS and its entire 800 MHz infrastructure. Sprint Nextel, whose 800 MHz cellular telephone system is a principle source of the interference, agreed to fund the cost of the reconfiguration. This will eliminate the interference.

To successfully complete the rebanding and minimize disruption to the working public safety communications system, MPSCS staff developed a strategy for the rebanding implementation. At present, plans are largely complete and awaiting only final resolutions of certain international border area agreements to proceed.

Objectives:

- Complete the development and facilitate approval of a comprehensive rebanding plan for the MPSCS
- Improve ongoing inventory and administrative processes for the MPSCS
- Eliminate interference to all public safety radios on the MPSCS through rebanding
- Ensure comparable operational characteristics after completion of the rebanding process



Projects

Provided below are examples of some of the short and long- range plans that the MPSCS staff has established to assist with carrying out the vision of facilitating the distribution and sharing of information; providing ease of use and accessibility; ensuring security and protection of information and promoting the use of central/ shared systems.

Short-range Plans

Add New Members

There are several significant additions to the MPSCS membership in progress. These include St. Clair and Washtenaw Counties. Both counties are adding additional sites and infrastructure to the system to provide enhanced countywide coverage. Other counties are in the early stages of committing to join the MPSCS.

- In Washtenaw County, a new simulcast system consisting of 7 or 8 towers and over 2,000 radios will be completed in 2009.

Provide Interoperability Options for Users and Non-Users

Interoperability is a widespread priority in the United States—due in large part to acts of terrorism and natural disasters in this country—and it is a primary function of Michigan's communications system. At present, several interoperability options are available and in use with the MPSCS.

The system provides all current users with access to FCC-designated mutual aid and tactical channels. These channels use analog modulation and are available to all user radios operating in the 800 MHz NPSPAC band, regardless of home system type. With the 800 MHz rebanding presently underway, one challenge is maintaining interoperability with Canadian public safety agencies. Under the current system, U.S. and Canadian agencies using 800 MHz frequencies have access to a number of common channels. These common channels may be lost depending on the final border area frequency agreements established between the U.S. and Canada.

Non-MPSCS users on compatible 800 MHz digital trunking systems may have their radios programmed to operate on selected talk groups on the MPSCS system. Likewise, certain MPSCS users may have their radios programmed to operate on other compatible systems.

Non-MPSCS users on incompatible 800 MHz analog or digital home systems, such as Oakland County's M/A-COM system, have access to the five common 800MHz mutual aid and tactical channels.

A cache of MPSCS radios is also maintained. These radios may be used in situations where other agencies do not use radios compatible with either of the previous options.

Finally, the MPSCS allows patches (interconnection via an appropriate interface circuit) to other radio systems in specific situations. This is not an optimal solution as it creates an additional load on the MPSCS resources and only operates effectively within the coverage area of the other agency's system. However, it is a popular option used by many small to middle-sized agencies operating on other frequency bands to provide interoperability with the MPSCS system.

Complete Upgrades and Plan for Future Improvements

Upgrades to the MPSCS take many forms. System-wide changes usually involve system software upgrades. Other upgrades tend to be localized infrastructure equipment changes necessitated by the addition of channels or sites or conversion of sites to simulcasting or a combination of these. Other equipment changes are necessitated by equipment obsolescence or failure. An overview of planned upgrades is provided below:

- Dispatching: The MPSCS currently uses Motorola's ASTRO Version 6.5 software. This version includes capability for Integrated Voice and Data (IV&D). At present, IV&D capability is only being tested by Van Buren County. Data capability is limited to 9.6 Kbps. The next anticipated major system software upgrade is to ASTRO Version 6.9 software. This version software will allow the use of IP (Internet protocol) dispatch consoles and will create more dispatching capacity. This is critical because the system has reached a limit in adding additional dispatch consoles in southeast Michigan. This upgrade will eliminate the need for legacy Console Electronics Banks (CEB's), and Ambassador Electronics Banks (AEB's)—the audio switch that currently directs dispatcher audio.
- High Performance Data Capability: The ASTRO version 6.9 software also includes High Performance Data (HPD) capability on 700 MHz channels. This allows 96 Kbps data in a wider bandwidth channel. However, the channels at 800 MHz are normally 12.5 KHz bandwidth. High speed data will be limited to channels which have adequate clearance on each adjacent channel to allow the wider bandwidth.

- Data Routing Flexibility: Once the conversion to software version 6.9 has been made, the system can be prepared for the next stage upgrade, conversion to Version 7.0 software. This will include a new core network design utilizing MPLS (MultiProtocol Label Switching), allowing greater data routing flexibility and eliminating the Nortel wide area network (WAN) switch currently required in each radio zone.
- Monitoring & Alarm: The MPSCS infrastructure monitoring and alarm function is handled by the MOSCAD system. MOSCAD is rapidly becoming outdated, and support is becoming problematic. A new system will be needed to provide a suitable path for upgrade and expansion going forward. At present that path has not been determined.
- System Diagnostics & Performance Metrics: Another desirable upgrade is the ability to conduct system diagnostics and performance metrics based on the Air Traffic Interface Application (ATIA) "port trunking" data stream. There is presently only limited user traffic data collection and analysis capability available in the system. Software for performing analysis of this user data is available from a third party vendor (Genesis Software). Some investigation of its capabilities has been completed. However, consideration of this upgrade is still in very early stages, and no commitment has been made for the addition of this software.

An important aspect of the upgrade process is the fact that installed equipment has a finite lifecycle. It is necessary to replace aging equipment to maintain a continued level of performance and to obtain new capabilities and features implemented in the later design versions of the equipment.

Monitor and Build System Capacity

As more and more public safety users join the MPSCS, system capacity must be closely monitored. When additional capacity is needed in certain areas, additional frequencies must be acquired. The MPSCS currently operates in the 800 MHz NPSPAC band which is quickly becoming full in high population areas. The 700 MHz band will be available for use by public safety in the future. Both 800 MHz and 700 MHz may be used in a single radio by purchasing equipment capable of operating in both. The 700 MHz band can thus be used to increase system capacity in areas where the 800 MHz band is congested.

Future improvements in technology will also help address system capacity concerns. Currently the Project 25 Phase 2 standards for time division multiple access (TDMA) systems are in the development stages. Once implemented, the new TDMA standards would facilitate the manufacturing of equipment that would allow twice the capacity on each transmitter. This would in turn provide more than twice the capacity at each site using the same amount of frequency spectrum and equipment.

Dispatch Consolidation

The trend is to consolidate 9-1-1 call-taking and dispatch operations into centralized facilities handling multiple agencies. This provides improved cooperation and coordination, a significant manpower and facility cost savings, and reduced requirements on the system infrastructure. The MPSCS members currently have consolidated dispatch facilities in a number of districts.

The MPSCS dispatch systems currently operate on a platform that is limited by its dated synchronous architecture. Due to the extraordinary growth of the MPSCS, certain areas of the state are close to the maximum number of dispatch consoles that can be supported. The MPSCS is addressing these issues through dispatch consolidation and proposed system upgrades. As part of a MPSCS dispatch consolidation, new IP-based equipment will be utilized. This equipment has greater capacity and is far more efficient, allowing the MPSCS to accommodate its rapid system growth and dispatch needs.

Current P25 standards now include IP-based dispatch consoles as part of the CSSI console sub-system interface standard. This will allow the MPSCS to have greater flexibility in purchasing from multiple vendors, eventually resulting in greater savings through the competitive bid process.

Long-range Plans

700 MHZ spectrum availability

The FCC has allocated 24 megahertz of spectrum to public safety in the 700 MHz band. There are two issues preventing the MPSCS use of this spectrum at present. The first is the existence of several television stations on the spectrum in the southern portion of the Lower Peninsula. Those stations must vacate the spectrum by February 2009.

The other issue is the FCC acceptance of the Michigan 700 MHz band plan. This plan details how the Michigan Regional Frequency Advisory Committee intends to allocate the frequencies in the 700 MHz public safety spectrum. The plan has been submitted to the FCC and, once the plan is accepted, the Regional Planning Committee will be authorized to review and approve license applications.

The 700 MHz spectrum will provide additional narrowband voice channels. It will also allow aggregation of channels in a designated portion of the available 700 MHz spectrum into wideband channels. This portion of the spectrum is the subject of much current debate and could be affected by FCC rules covering the auction of commercial 700 MHz spectrum.

A proposal to create a private carrier-public safety partnership to build a broadband, nationwide system was created by the FCC and incorporated into the recent auction of the 700 MHz spectrum. The network would provide commercial service with public safety users having priority access. However, the spectrum allocated for that partnership did not receive the FCC's required minimum bid and so was not sold. The FCC is re-evaluating the rules it created for that partnership and will revise those rules and attempt another auction of that spectrum later this year. The auction of the commercial spectrum is congressionally mandated to occur by 2008.

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4.9 GHz spectrum is useful for short distance, point-to-point microwave links as it is similar to microwave. It is relatively short range with moderate gain antenna systems and is useful in creating data "hot-spots" similar to the Worldwide Interoperability for Microwave Access (WiMAX) systems used with personal computers. The relatively low cost of equipment for this purpose makes implementation attractive. However, the use of uncoordinated frequencies in this band may limit its usefulness due to interference from systems in adjacent areas using essentially the same frequencies. Some effort has been made to establish the Michigan Regional Planning Committee as a frequency coordinating body for this spectrum, but there is no official authority currently in place to take on this responsibility.

The Future

New Technologies

Some new techniques and technologies which might be employed in the MPSCS in the future are still in development.

Mesh technology is already used in some limited, data network applications. Its use in wide- area applications could reduce the requirements for additional base station sites, while still providing improved coverage, especially in rural locations.

The technology depends on each user radio becoming a data repeater which passes received data packets on to all other user radios within range. These radios in turn pass the data on to all radios within their range, and so on. Coverage is thus enhanced as each radio needs to communicate only with another nearby user radio instead of a fixed- location station, which may be considerably farther away.

Another technology now reaching maturity is the software -defined radio. This is essentially a computing platform married to broadband radio frequency components. The operating characteristics of the resulting radio are determined by the software running in the computing platform. Generation of various frequencies and waveforms is only a matter of programming the computing platform to produce the appropriate output waveforms or to process the received signals.

The radio can span significant portions of spectrum and operate in a variety of modes, and in analog or digital configurations. This flexibility will enable the radio to interface to a wide variety of services and provide a wide range of capabilities. These will all be easily and instantaneously selectable. Multi-band, multi-mode radios will be easily configured and, if necessary, reconfigured to add additional bands, modes, power outputs, etc.

The integration of a multifunction computing platform into the radio will also allow the radio to become 'smart' and cognizant of its environment. It will be able to search out and use unused available spectrum, avoiding interfering signals, and utilizing appropriate modes to insure seamless communications in a rapidly changing radio frequency environment.

There is little doubt that public safety communications systems will soon carry image data. This may be relatively simple, fixed images such as driver's license images at first, but once the gate is opened, advanced high-resolution imaging and real-time video will surely follow. This will place additional bandwidth requirements on public safety systems.

Metrics and Measures

Goal 1: Interoperability

- Facilitate the addition of several thousand new radios by agencies that were awarded Public Safety Interoperable Communications (PSIC) grant money beginning in the spring of 2008, with all projects completed by 2010
- Support completion of the MPSCS Urban Area Security Initiatives (UASI) for improving interoperability in southeast Michigan by 2010; the date grants must be completed
- Support completion of 9-1-1 dispatch center consolidation projects for the Michigan State Police and local public safety agencies, including St. Clair County in 2008 and Chippewa County by 2010
- Implement the MPSCS IP consoles in Washtenaw County by 2009
- Support other forms of interoperability between the MPSCS users and public safety agencies still utilizing radio systems on analog mode or other frequency bands (Ongoing)

Goal 2: Outstanding Radio Coverage

- Integration of the Washtenaw County radio system by 2009
- Improve coverage in the city of East Lansing by addition of radio infrastructure at the East Lansing tower site by 2008
- Integrate new towers provided by local public safety agencies funded through PSIC grant projects by 2010
- Expand the St Clair County radio system integration project by 2009
- Facilitate integration of the Saginaw County radio system by 2010

Goal 3: Cutting-Edge Technology

- Maintain Project 25 compliance through the incorporation of new, tested standards such as the Inter Sub-System Interface (ISSI) component and upgrading the MPSCS system software to Version 7.X by 2010
- Expand of data transmission and sharing capabilities (High Performance Data) by early in 2010
- Upgrade the MPSCS to add high-performance data capabilities and integrate more advanced simulcast systems by the end of 2008
- Pilot 700 MHz radio sites to provide access to additional interoperable spectrum by 2010
- Implement 700MHz voice channels and/or Project 25 TDMA standard if available by 2010

Goal 4: System Upgrades at No Cost to Customer

- Upgrade the MPSCS to Motorola's ASTRO 6.9 version software platform in 2008
- Expand the Interoperability Gateway Network to support both a strategic technology reserve and enhance system monitoring by 2009
- Develop and secure a funding strategy for future upgrades and lifecycle maintenance in 2008

Goal 5: Rebanding the MPSCS to New 800 MHz Spectrum

- Complete the development and facilitate approval of a comprehensive rebanding plan for the MPSCS by the end of 2008
- Eliminate interference to all public safety radios on the MPSCS through rebanding in 2009
- Ensure comparable operational characteristics after completion of the rebanding process in 2009

During the wildfires in the UP last year, MPSCS enabled interoperability between the Michigan DNR and first responders from Minnesota and Canada

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Statewide Radio Communication

Vision of Action

The State of Michigan works diligently to provide access to a statewide public safety communications system for all Michigan public safety agencies. We strive to provide the ultimate in both inter-agency and intra-agency interoperability and facilitate cost-effective implementation and utilization of new communications technologies for those agencies.

The Michigan Public Safety Communication System (MPSCS) provides state-of-the-art communications using advanced technology based on nationally- recognized standards contained in the Association of Police Communications Officers (APCO) Project 25 specifications. As a leader in standards-based public safety interoperability, it is essential that the MPSCS stay current with new and important life-saving technologies. The ability to share information on demand and in real time, whether it is voice or data, is critical to the first responder.

The function of any public safety communications system is to assure rapid response and cooperation of emergency personnel. The MPSCS achieves this through statewide coverage and advanced technology, while remaining reliable and easy to use. System operation is monitored 24 hours a day to ensure that the system remains ready to assist Michigan's first responders deal with any situation. The MPSCS is the primary communications interoperability solution for Michigan's public safety first responders.

Background

The MPSCS is a statewide radio communications system that:

- Serves over 1203 federal, state and local public safety agencies
- Is comprised of 231 tower sites, over 20 integrated state and local public safety dispatch centers and a network communications center serving over 40,012 radios
- Provides 97% mobile coverage across Michigan
- Provides enhanced portable coverage within the counties of Monroe, Genesee and Macomb as well as within the city of Detroit

Starting in the mid-1990's, the state made a significant investment to provide statewide radio communication for first responders. While the MPSCS was originally implemented to serve the Michigan State Police, in recent years the Michigan Department of Natural Resources and the Michigan Department of Transportation have become reliant on the system. More importantly, over 900 local public safety agencies have now joined the MPSCS, accounting for 84% of the system's "Push-to-Talks" (PTTs).

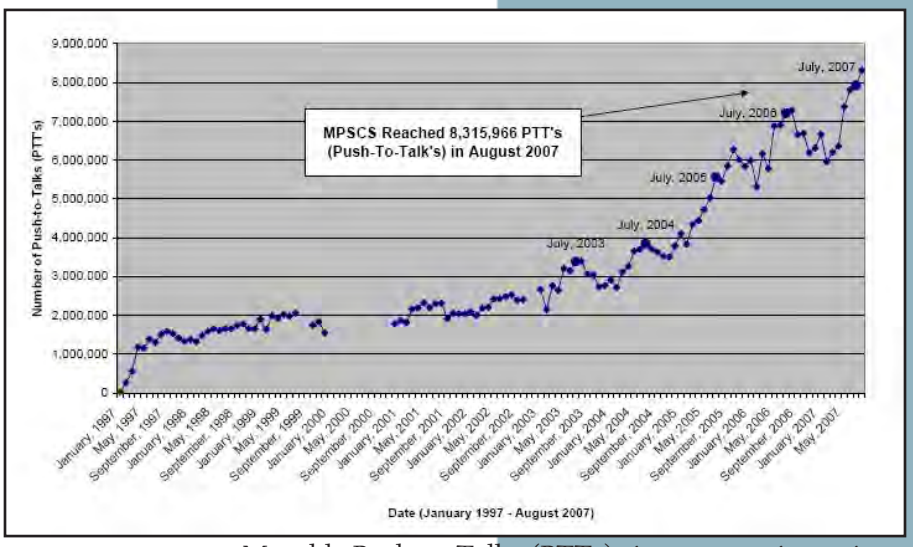
Today nearly 75% of the radios on the MPSCS are local public safety agencies units. The MPSCS is robust enough to serve the needs of many more federal, state and local agencies. Local agencies find the MPSCS financially attractive and benefit by leveraging the state's investment. The MPSCS provides the interoperable communications essential to today's emergency responder. Smaller agencies many times only need to acquire radios to join the MPSCS. Larger agencies frequently add additional towers and devices to provide in-building portable coverage within their jurisdiction or to meet other special local needs.

Michigan Public Safety Communication System

Goal 1: Interoperability

The MPSCS provides local, county and statewide interoperability without the implementation of cumbersome interconnections between radio systems called patches. Because it is a standards-based shared system, any member of the MPSCS can speak with another member with the simple touch of a button, a feature that is already proven as a life-saving, safety-enhancing tool for the citizens and public safety officials of Michigan.

The system's ability to expand and adapt to unique requirements permits it to accommodate the current and future interoperability needs of Michigan's public safety community.



Monthly Push-to-Talks (PTTs) since system inception

Objectives:

- Continue to provide the highest level of interoperability for all first responders in Michigan
- Facilitate the addition of several thousand new radios by agencies awarded grant money
- Support initiatives for improving interoperability in southeast Michigan
- Support 911 dispatch center consolidation projects
- Support other forms of interoperability between the MPSCS users and public safety agencies still utilizing radio systems on analog mode or other frequency bands (Ongoing)

Goal 2: Outstanding Radio Coverage

The MPSCS provides 97% mobile radio coverage statewide. While there is no guarantee of portable radio coverage, many local agencies have enhanced the MPSCS by building and integrating additional radio infrastructure such as tower sites. This has significantly increased the MPSCS' portable radio coverage in southeast Michigan. The system's flexibility allows an agency wishing to achieve a specific level of portable radio coverage in its jurisdiction to add additional sites or other coverage-enhancing facilities. The system's adaptability allows various approaches to coverage enhancement.

Objectives:

- Continue system enhancements to expand and improve mobile radio coverage statewide
- Add new members
- Integration of the Washtenaw County radio system
- Improve coverage in the city of East Lansing by addition of radio infrastructure at the East Lansing tower site
- Integration of several new towers provided by local public safety agencies funded through Public Safety Interoperable Communications (PSIC) grant projects
- Expansion of the St. Clair County radio system integration project
- Work with various other counties to facilitate integration of their radio systems

Goal 3: Cutting-Edge Technology

The MPSCS has been recognized as being one of the nation's premier public safety radio communications systems. That recognition is based in part on the system's adoption of state-of-the-art technology.

The MPSCS utilizes the latest "digital trunked" technology. The system is also compliant with the Association of Police Communications Officers (APCO) Project 25 standards. These standards establish a common baseline of equipment specifications allowing various manufacturers to design and supply compatible radio equipment. The standards are continuously evolving to better meet the needs of public safety agencies.

Future MPSCS upgrades will include High Performance Data (HPD) capability. This will significantly increase the rate at which digital data can be transmitted over the system. It will also allow additional data features, including automated access to centralized databases.

Objectives:

- Replace aging equipment
- Offer the latest, proven technologies while maintaining compliance with established, recognized standards to ensure that the system never becomes technologically obsolete
- Maintain Project 25 compliance through the incorporation of new tested standards
- Expand data transmission and sharing capabilities
- Upgrade the MPSCS to add "high performance" data capabilities and integrate more advanced simulcast systems
- Pilot 700 MHz radio sites to provide access to additional interoperable spectrum
- Implement 700MHz voice channels and/or Project 25 TDMA standard

Goal 4: System Upgrades at No Cost to Customer

The state of Michigan is dedicated to keeping the MPSCS technology current. The system currently utilizes the Motorola ASTRO 25, Version 6.5 IP voice platform, a stepping-stone for future upgrades and enhancements. The system will adopt new technologies as new standards are developed.

For local public safety agencies, constructing a stand-alone system means the agency is responsible for upgrades – a process that can be costly and disruptive. By contrast, upgrades to the MPSCS infrastructure are currently installed free of charge to members; thus, users are provided the latest technology without the necessity of securing additional funds.

The MPSCS administrative and engineering staff remains dedicated to maintaining the system at the proven, forward edge of technology.

Objectives:

- Continue to provide upgrades of the infrastructure free of charge to members
- Upgrade of the MPSCS to Motorola's ASTRO 6.9 version software platform
- Expand the Interoperability Gateway Network to support both a strategic technology reserve and enhance system monitoring
- Develop and secure a funding strategy for future upgrades and "lifecycle" maintenance

Goal 5: Rebanding the MPSCS to New 800 MHz Spectrum

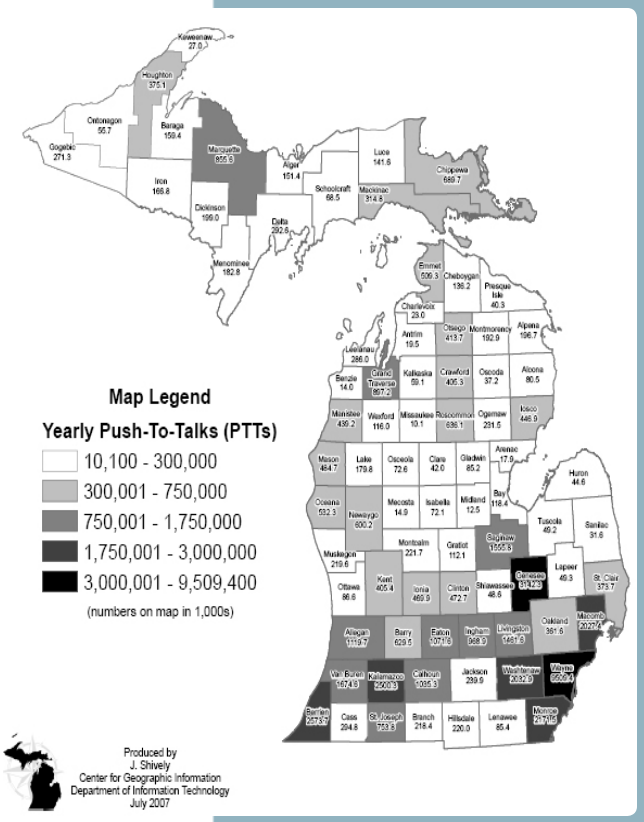
Several years ago, the Federal Communications Commission (FCC) responded to significant interference to public safety communications created by the introduction of cellular architecture systems into the commercial 800 MHz spectrum. After much public debate, the FCC issued an order for public safety agencies on the 800 MHz band, including the MPSCS, to relocate within the band. This relocation is separating the frequencies used by public safety and cellular-type systems to eliminate the interference.

This rebanding process includes the retuning of every radio on the MPSCS and its entire 800 MHz infrastructure. Sprint Nextel, whose 800 MHz cellular telephone system is a principle source of the interference, agreed to fund the cost of the reconfiguration. This will eliminate the interference.

To successfully complete the rebanding and minimize disruption to the working public safety communications system, MPSCS staff developed a strategy for the rebanding implementation. At present, plans are largely complete and awaiting only final resolutions of certain international border area agreements to proceed.

Objectives:

- Complete the development and facilitate approval of a comprehensive rebanding plan for the MPSCS
- Improve ongoing inventory and administrative processes for the MPSCS
- Eliminate interference to all public safety radios on the MPSCS through rebanding
- Ensure comparable operational characteristics after completion of the rebanding process



Projects

Provided below are examples of some of the short and long- range plans that the MPSCS staff has established to assist with carrying out the vision of facilitating the distribution and sharing of information; providing ease of use and accessibility; ensuring security and protection of information and promoting the use of central/ shared systems.

Short-range Plans

Add New Members

There are several significant additions to the MPSCS membership in progress. These include St. Clair and Washtenaw Counties. Both counties are adding additional sites and infrastructure to the system to provide enhanced countywide coverage. Other counties are in the early stages of committing to join the MPSCS.

- In Washtenaw County, a new simulcast system consisting of 7 or 8 towers and over 2,000 radios will be completed in 2009.

Provide Interoperability Options for Users and Non-Users

Interoperability is a widespread priority in the United States—due in large part to acts of terrorism and natural disasters in this country—and it is a primary function of Michigan's communications system. At present, several interoperability options are available and in use with the MPSCS.

The system provides all current users with access to FCC-designated mutual aid and tactical channels. These channels use analog modulation and are available to all user radios operating in the 800 MHz NPSPAC band, regardless of home system type. With the 800 MHz rebanding presently underway, one challenge is maintaining interoperability with Canadian public safety agencies. Under the current system, U.S. and Canadian agencies using 800 MHz frequencies have access to a number of common channels. These common channels may be lost depending on the final border area frequency agreements established between the U.S. and Canada.

Non-MPSCS users on compatible 800 MHz digital trunking systems may have their radios programmed to operate on selected talk groups on the MPSCS system. Likewise, certain MPSCS users may have their radios programmed to operate on other compatible systems.

Non-MPSCS users on incompatible 800 MHz analog or digital home systems, such as Oakland County's M/A-COM system, have access to the five common 800MHz mutual aid and tactical channels.

A cache of MPSCS radios is also maintained. These radios may be used in situations where other agencies do not use radios compatible with either of the previous options.

Finally, the MPSCS allows patches (interconnection via an appropriate interface circuit) to other radio systems in specific situations. This is not an optimal solution as it creates an additional load on the MPSCS resources and only operates effectively within the coverage area of the other agency's system. However, it is a popular option used by many small to middle-sized agencies operating on other frequency bands to provide interoperability with the MPSCS system.

Complete Upgrades and Plan for Future Improvements

Upgrades to the MPSCS take many forms. System-wide changes usually involve system software upgrades. Other upgrades tend to be localized infrastructure equipment changes necessitated by the addition of channels or sites or conversion of sites to simulcasting or a combination of these. Other equipment changes are necessitated by equipment obsolescence or failure. An overview of planned upgrades is provided below:

- Dispatching: The MPSCS currently uses Motorola's ASTRO Version 6.5 software. This version includes capability for Integrated Voice and Data (IV&D). At present, IV&D capability is only being tested by Van Buren County. Data capability is limited to 9.6 Kbps. The next anticipated major system software upgrade is to ASTRO Version 6.9 software. This version software will allow the use of IP (Internet protocol) dispatch consoles and will create more dispatching capacity. This is critical because the system has reached a limit in adding additional dispatch consoles in southeast Michigan. This upgrade will eliminate the need for legacy Console Electronics Banks (CEB's), and Ambassador Electronics Banks (AEB's)—the audio switch that currently directs dispatcher audio.
- High Performance Data Capability: The ASTRO version 6.9 software also includes High Performance Data (HPD) capability on 700 MHz channels. This allows 96 Kbps data in a wider bandwidth channel. However, the channels at 800 MHz are normally 12.5 KHz bandwidth. High speed data will be limited to channels which have adequate clearance on each adjacent channel to allow the wider bandwidth.

- Data Routing Flexibility: Once the conversion to software version 6.9 has been made, the system can be prepared for the next stage upgrade, conversion to Version 7.0 software. This will include a new core network design utilizing MPLS (MultiProtocol Label Switching), allowing greater data routing flexibility and eliminating the Nortel wide area network (WAN) switch currently required in each radio zone.
- Monitoring & Alarm: The MPSCS infrastructure monitoring and alarm function is handled by the MOSCAD system. MOSCAD is rapidly becoming outdated, and support is becoming problematic. A new system will be needed to provide a suitable path for upgrade and expansion going forward. At present that path has not been determined.
- System Diagnostics & Performance Metrics: Another desirable upgrade is the ability to conduct system diagnostics and performance metrics based on the Air Traffic Interface Application (ATIA) "port trunking" data stream. There is presently only limited user traffic data collection and analysis capability available in the system. Software for performing analysis of this user data is available from a third party vendor (Genesis Software). Some investigation of its capabilities has been completed. However, consideration of this upgrade is still in very early stages, and no commitment has been made for the addition of this software.

An important aspect of the upgrade process is the fact that installed equipment has a finite lifecycle. It is necessary to replace aging equipment to maintain a continued level of performance and to obtain new capabilities and features implemented in the later design versions of the equipment.

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Michigan's Technology Future

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Michigan's Technology Future

"We are moving to a new wave of IT-enabled change...

While the old wave changed how we distribute services, the new wave changes the entire value chain and integrates service delivery and other work across program boundaries. While the old wave involved the 'customers' of government and the builders of infrastructure and portals, the new wave involves all government workers and their business partners."

-Jerry Mechling, Faculty Chair
Harvard Policy Group on
Network-Enabled
Services and Government

The fifty-one year history of information technology (IT) in Michigan, as well as the 2008 IT plan, are a prologue to new public values, to a new IT. The new IT is more than technology; it encompasses the strategic use of information with the integration of processes and relationships.

Michigan's IT history, graphically depicted in the timeline below, demonstrates that Michigan's state government can and does support, enable and increasingly drive public service and government operations. It does so at a pace that fully engages available solutions in a timely, efficient and effective manner.

This engagement and sustained level of maturity and agility has been the result of deliberate, planned actions. Michigan IT has historically anticipated the challenges, necessary solutions and the changing nature of public values, business models, relationships, technology delivery platforms and information and technology itself.

Today, the shape of IT continues to change. As Gartner, Forrester Research, the Center for Digital Government, the Harvard Kennedy School's Leadership for a Networked World and others have noted, in the future, IT will be even more transformational. IT leadership may not necessarily reside within the IT organization and different stakeholders will participate under different rules.

Michigan's IT planning process and management will continue to anticipate the evolution of IT and further recognize that our future is not just about technology, but also involves information, business process and public values.

Overview

Principles and Desired Future State

Over the last six years, and through two IT Strategic Plans, Michigan's IT has reached a level of maturity and capability where it is possible to both meet existing commitments, as well as begin addressing some of the historical structural challenges facing the state and the evolution of IT potential.

To tap into this potential and address gaps, a set of driving principles were created to assist with the development of the 2008-2012 Michigan IT Strategic Plan. These principles not only guide the development of strategies that support and bridge the six IT plan goals (See Figure 4) and represent action steps, they also define the desired future state.

They are as follows:

- Effective and Efficient Customer-Based Operations and Services: Continue optimizing core service delivery, facilitating and simplifying access to government and the services it provides as well as improving efficiencies and reducing costs
- Performance, Accountability and Public Value: Ensure public value through alignment among state policies, citizen service and agency business needs. Provide accountability and high-performance service delivery through best practice performance management
- Privacy, Security and Public Trust: Ensure public trust through providing optimal levels of security, citizen privacy and disaster avoidance and mitigation
- High-Performance Workers and Workplace: Develop and maintain a high-performance workforce and workplace, capable of supporting current service needs and meeting or exceeding future requirements
- Agile Management and Infrastructure: Deliver fundamental process, service delivery, platform and infrastructure changes as they are needed
- Shared Solutions, Standards and Flexible, Open Boundaries: Maximize sharing solutions, services and infrastructure within the enterprise, other levels of government and the private sector, moving toward compatible, shared standards
- Maturation and Modernization of Solutions: Ensure sustained modernization of a comprehensive range of solutions and technologies with high performance or transformational potential that are suitable for connecting tiers of government, public and private sectors and improving performance and customer service
- Innovation and Transformation: Develop an expectation, culture and capacity for innovation and transformation of government. Shift from a support and enabling role of IT in service and business processes to a driving role, providing leadership and serving as a catalyst in business process and organizational change

IT Strategic Plan Structural Changes

Engaged, Agile Goals, Strategies and Initiatives for 2008-12

In order to meet the above challenges and opportunities, Michigan is enhancing the goal foundation of its 2004 and 2006 plans. Selected strategies and initiatives have been strengthened or restructured and a new goal has been added.

- Goals 1-3, supporting core services (Access, Service, IT Management and Infrastructure), have been refined with a greater emphasis on responsiveness and accountability to customers, shared services, aligning front- and back-end management of processes and enabling agile management capabilities
- Goal 4, high-performance workforce and workplace - based on its support and enabling role for all of the other goals, efforts around the workforce have been restructured and elevated in priority
- Goal 5, cross-boundary solutions, contains restructured strategies and is closely integrated with Goal 2, shared services
- Goal 6, innovation and transformation, is a new goal, driving innovative services and processes to transform Michigan's government service

Process Changes

This portion of the document describes the changes in the planning process and values that will be required to transform Michigan IT. These include:

- A four-tiered, baseline assessment focusing on policies and principles, strategies, operations and performance
- Expansion of engaged issues and public policy, social, business and technology solution options
- A new, Michigan solution and implementation framework actualizing and implementing strategic action engendering new public sector, business model and IT values

Goal 6 of the Michigan IT Strategic Plan–Innovation and Transformation–was explicitly designed and developed to support and drive change and change management through IT and process redesign.

Aligned with Michigan's Cabinet Action Plan and the Government Process Improvement Initiative, Michigan's IT innovation and change initiatives will address the challenges and opportunities identified through:

- Report of the Michigan Governor's Emergency Financial Advisory Panel
- Report on "Government and Business Process: Opportunities for Improvement," Michigan's Government Process Improvement Initiative (GPII)
- 2008 Government Performance Project Best Practices, Pew Center on the States
- Michigan Legislative Commission on Government Efficiency

New Values, New Strategies: The Next IT

As noted above, IT in Michigan is reaching a level where it is possible to meet and exceed existing commitments, challenges and potential. In order to fulfill this promise–beyond the action steps discussed above–we also need to realign key principles and strategies and change management goals and practices.

The guiding principles listed above will not only drive the development of strategies that support and bridge the six IT plan goals and represent action steps, they also define the desired future state. Provided below are examples of how the principles will be operationalized and embody both process as well as outcome changes.

Full Digital Government Maturity

Transition digital government from enabling services to driving IT-related processes and services by strengthening functional capabilities and utilizing maximally effective and efficient IT solutions in all key issue, service, organizational and operational areas.

- Strengthen or implement functional capabilities that help drive the transition to full digital government maturity. Such functions include, but are not limited to, operations, policy, sourcing, applications, customer support, portfolio and investment management.
- Support and enable services with government and among customers, increasing the number of shared IT and IT-supported services in Michigan state government, and use a larger proportion and number of the available range of effective IT solutions
- Maintain standards and maturity through proactive and sustained update, acquisition and use of global best practices. This includes public and private sector "high and transformational benefit solutions," including management and operational processes emerging over the immediate 5-year horizon.

Opportunities and Pressures Driving IT Solutions

Social, Economic and Demographic Issues and Opportunities

- Globalization and the new economy
- Michigan structural change issues
- Demographics
- Fiscal pressures
- Privacy and security threats, disaster recovery
- Consumerization of IT and role of individual, social networking
- Sustainable resources

Public Value

- Gubernatorial, legislative, judicial and administrative requirements
- Support and enable agency, customer business needs
- Governing by network, not hierarchies
- Strategic, transformational role of information technology

Transformation of Government

Establish government transformation as a goal and outcome; changing not only processes and solutions but what public policy, public value ends and outcomes are possible. For Michigan, this planned transformation refers to a deliberate and systematic effort to support, enable, drive and sustain changes in internal and external government operations and services, including decision-making, governance processes, goals and constituent participation.

Strategic Process and Change Management

Provide leadership, direction, support and brokering capabilities for government-wide process design and redesign, improving the effectiveness and efficiency of government services. This also entails making planned, structured changes in organizations, processes and/or technologies and attention to necessary changes in culture, values, people and behaviors.

Maximizing Information, Knowledge and Intellectual Capital

Utilize data, information, knowledge and intellectual capital as a strategy, input and process enhancer at the enterprise and cross-boundary level. This represents a shift from a focus on information technology (IT) to the inclusion of information, communication and technology (ICT) in Michigan's IT mission, strategies and actions.

- This is both a strategy, driven by customer needs, and a device, shaped by technology, for handling and making the most of information.
- Value enhancements include: processing, gathering, manipulating and organizing data in a way that adds to knowledge, performance assessment, decision-making and the human/computer interaction.

Michigan Gap Assessment

Michigan's IT strategy is derived through a far-reaching and systematic analysis of current needs and opportunities, as well as projected future requirements and capabilities. Looking at both the immediate and longer-term, the gap analysis looks at whether Michigan IT is keeping its commitments and promises and what is required to meet challenges and opportunities.

Best Practice Baseline Capabilities (2006-2008): Is state government and Michigan IT consistently delivering on the basics?

MDIT currently is one of the most advanced and effective states in its IT policies, strategies, management practices and services. It is a national leader and model in several areas, including alignment with gubernatorial policies and strategies, performance management and reporting, statewide strategic planning, a highly cost-effective centralized enterprise approach, shared and cross-boundary services, management and use of information and selected service delivery areas, including the state portal. Building on these strengths, Michigan is prepared to take the innovative and transformational steps described in this plan.

Sustainable Near Future (2008-2010): Are we proactively using the most effective means, the best practices and maximizing our opportunities?

Michigan IT has the capability to deliver on its current commitments as well as those in the near future. In many areas it has and will continue to exceed national standards and represent a best practice model. However, a number of opportunity gaps need to be addressed to ensure effective and improved service delivery, and continue to meet standards of excellence into the longer term. These include:

- Full integration and linkage of guiding principles across all goal areas, including: shared and cross-boundary services, performance management and accountability
- Strengthened and new strategies for addressing near future needs
- An adequate management and governance framework for the challenges of today and tomorrow
- A mature, modern, best practices scope of solutions, including new initiatives

Engaging the Future effectively and now (2008-2012): Are we leaning into, defining and effectively engaging future needs, challenges and opportunities?

Bold, sustained commitment and changes are needed to address the intermediate and longer-term future. The implementation steps for this plan involve a four-step process. These require innovative and transformational changes in policies and strategies, management and operations, as well as in service delivery.

Trends, Issues and Opportunities

Global, National and Michigan

The global and national drivers and disruptive trends discussed in the 2006 IT Strategic plan such as knowledge capital, economic transformation and network structures continue to drive change. However, selected economic, social and policy issues have become greater priorities nationally and in Michigan, including long-term domestic challenges such as increasing dependence on oil imports, growing global competition, structural changes in the economy, accelerating climate change and rising health care costs. At the same time, there are also emerging opportunities such as Web and Government 2.0, Wikinomics, sourcing and alternative service delivery, shared services and cross-boundary solutions.

Available, Best Practice Solutions and Strategies

The Michigan solution and implementation framework is based upon available ,best practice solutions and strategies.

Public Values, Policy and Business Processes

There are several values and trends that require particular attention. They are associated with changes in IT within and outside the IT organization, involve all phases of the value chain and a growing range of stakeholders and partners. According to Gartner research, Changing Shape of IT series (2008), elements changing and presenting new opportunities include business changes, process improvements, information management, operational technology, hardware, software and other tools.

Opportunities and Pressures Driving IT Solutions (Cont.)

Business Models

- Workforce and workplace
- Alternative acquisition and delivery models

Technology

- Extensive legacy infrastructure and solutions
- Rapid, broad-based evolution of new technologies and solutions
- Flexible, open platforms, architecture

"Michigan has one of the most sophisticated information technology operations in the country and has used IT to gain efficiencies in a variety of areas -streamlining processes and saving the state money."

Neal Johnson, Director
Government Performance Project

Business drivers include:

- Expanded, more flexible business platforms
- Integration of enterprise architecture, innovation and transformation
- Collaboration outside of the enterprise
- Greater role for performance management, accountability and metrics
- Architecture and business process improvements
- Business ecosystem impacts
- Strategic information management

Forces accelerating technology include:

- Utility computing, software as a service, IT operations and sourcing futures
- Relationship between EA and Web 2.0
- Enterprise architecture (not just for IT organizations)
- The future of search and e-discovery
- Social network influence on technology adoption
- Managed technology diversity
- Central role of data warehouses

The following trends refer to the role of IT, not necessarily IT organizations as they are currently configured:

- It will increasingly be seen as a driver of business and process change.
- The focus of IT is continuing to shift from the "T" to the "I"
- IT leadership, policies and management direction may originate from several sources, some external to IT and involving new partners
- IT service delivery platforms will be more open and flexible and involve multiple external partners
- IT organizations will focus more on managing IT service delivery and sourcing than being direct providers of services
- Alternative acquisition and delivery models: Pay for outcome of technology, not ownership, and alternate sourcing models
- Agility in management capabilities is required both because of the changing nature of IT as well as the asymmetrical nature of the change factors

Technology

Several business process, technological and social solutions are in the forefront with potential for exceptional service improvements. Some are short range (less than two years) others are intermediate range (two to five years) and longer (5 to 10 years). Solutions or solution groupings may have a focus on driver or service areas, including business, societal or technology itself (See Figure 1). In addition to broad solution clusters such as Web 2.0, social computing and mobile and location-aware services, solution focus areas-discussed in Appendix D and the "Technology Solutions" highlighted in the main body of the plan under each of the six goals, Michigan will also systematically begin to track, assess, target, plan for and manage technology solutions (See Goal Six targets in Appendix C).

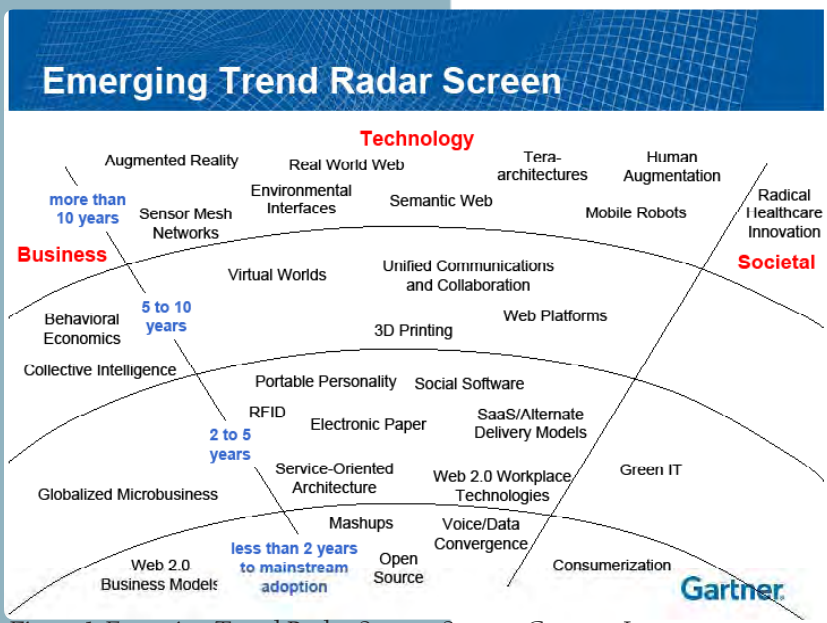


Figure 1. Emerging Trend Radar Screen. Source: Gartner, Inc.

The range of solutions under initial screening is extensive, and includes both solutions that are mature or approaching maturity, as well as those that are several years from mainstream adoption. A strong emphasis is placed on solutions that have either potential for high or transformational benefits, as well as solutions for cross-boundary partnerships and service relationships and process and design change opportunities in areas outside of IT.

Transformational Benefits

Two to Five Years

- Mashups are used to integrate content or functions from multiple sources and present easily understandable items of interest. For example, merging geographic data, map images and real-estate locations may be a real-estate site's offering.
- Radio Frequency Identification in Government: tracking of assets, loss prevention, inventory management, rail transportation, logistics, toll payment, traffic management and transportation.
- Wikis impact ad hoc collaboration, software documentation, simple project management, general information sharing, group authoring, content management, Web site management, research and development, and idea exploration. In government, they can be a particularly useful tool to support policymaking and to accelerate cooperative tasks in the area of disaster management.

Five to Ten Years

- Business Process Management in Government: Increased process agility and where process outcomes depend equally on coordinating human interactions, system-automated actions and information flows. Customer-facing or business-partner-facing processes are common candidates.
- Cross-Agency Case Management in Government: Case management tools provide greater insight into the needs of customers/citizens for all service providers within government or for those who provide services contractually. The major human services programs affected include cash assistance, medical assistance, child support, homeless services, community referral, child welfare, workers' compensation, unemployment compensation and veterans' benefits.
- Service-Oriented Architecture: Typical modularity of SOA at the level of business semantics modernizes the entire field of enterprise software. It changes the practices of software sales and pricing by independent software vendors and causes an internal reorganization of enterprise IT. Government organizations can expect a more-responsive IT organization, and should look for new opportunities for collaboration and integration among different departments and tiers of government, as well as with intermediaries.

High Benefits

Two to Five Years

- Advanced Analytics in Government: Predictive analysis, trend analysis and scenario evaluation, as well as where analytics are needed to identify associations and sequential patterns. In addition, advanced analytics can be used to examine the potential impact of new policy or operational changes, and can be influential in gaining decisional/resource support for new mission activities
- Customer Data Integration Hubs: Integrates established systems and provides a trusted, accurate, up-to-date, single view of the customer across the enterprise. Potentially will have a high business impact in terms of improved customer relationships, revenue opportunities, cost savings, risk mitigation and regulatory compliance.
- Enterprise Instant Messaging: Provide relief for 311 phone lines (and possibly 911/999 calls as well) and can lead to increased citizen interaction and satisfaction. Message processing systems can ensure that pertinent messages are kept for compliance purposes and that security protocols are not violated.
- Location-Aware Applications: Provide information or support based on the actual geographical location of a person or asset in real time. Applications can be deployed in field force automation, fleet management, logistics and good transportation in sectors such as government, healthcare, utilities and transportation.
- Social Network Analysis: Better identify constituent needs, trigger and support policymaking activities and gather feedback about government services.

Five to Ten Years

- Open Source Public Sector Vertical Applications: Online tax collection, property tax management, vehicle registration, e-learning, small authority and school administration (including financial management) and election result management.
- Whole of Government Enterprise Architecture: The role of EA is key to determining which IT investments are required by a government transformation program. EA also provides the basis to implement a whole-of-government portfolio management process. EA plays a crucial role in sustainable government transformation, because it provides the basis for different agencies and departments to engage toward a common transformation goal.
- XML in Government: Help reduce costs and improve the quality of content management, information access, system interoperability, database integration and data quality.

Excerpted from "Hype Cycle for Government Transformation, 2007, Gartner Research, July 11, 2007

The following categories of anticipated activity, and those described on the previous page, are based upon research by and analysis conducted with the Gartner "Hype Cycle for Government Transformation, 2007" by Andrea Di Maio, et al., dated July 11, 2007; the Gartner "Summarizing the Changing Shape of IT and Its Implications" by John Mahoney dated April 11, 2008; and also Forrester's "IT and Business Trends 2008 – Prepared for the State of Michigan" by Bobby Cameron, dated May 6, 2008.

Cross-Boundary Potential

A number of mature or maturing solutions and technologies, and solutions with transformational or high-performance potential, are also suitable for connecting tiers of government, public and private sectors or improving performance and customer service. Potential areas for review, assessment and implementation include:

Government Tiers: Service-Oriented Architecture, Enterprise Information Management, Federated Identity Management, Business Process Management, Extensible Markup Languages, Packaged Enterprise Resource Planning (ERP), Open Source Business Applications, and Vertical Applications.

Public and Private Sectors: Web Service-enabled Business Models, Public Semantic Webs and Security and Privacy Solutions

Improved Performance and Customer Service: Packaged Customer Relationship Management (CRM), Content Management, Location-Aware Applications, and Voice over Internet Protocol (VoIP)

Provided in Figure 1 is an at-a-glance reference of the various levels and timelines for anticipated technology maturity spanning across business, technology and societal needs.

Michigan Solution and Implementation Framework

Implementation of the plan requires a viable, sustainable and innovative action framework. The implementation framework builds upon existing strengths and accomplishments and addresses challenges and opportunities driven by national and global trends, as well as challenges specific, perhaps unique to Michigan. It provides a Michigan IT service and government transformation map and systematizes enabling tools. Selected examples of principles, guidelines and tools under the framework include:

Fully-Integrated Hierarchy of Solutions

Examples and changes from 2006 to 2008 Plans

Solutions vary by level and combination of actions. New issues may be targeted, new principles developed. Goals and strategies may be modified, added or deleted. Operations may be changed, and program and project performance management and tracking upgraded.

Engaging Issues and Trends: Developing Policies and Principles

In addition to continuing to address and engage issues and drivers discussed in the 2008 Michigan IT Strategic Plan, a number of issues are receiving greater emphasis and new ones are being addressed. These issues include societal, public policy, business model and technology changes, and may be external or internal to government or the IT function or organization.

Strategies

Strategies have been modified or added to better involve customers, enable and drive a high performance workforce and workplace, create agile management processes, modernize solutions and technologies, better coordinate state agency and external sharing of services, make strategic use of information, establish innovation as a strategy and capability or drive the transformation of services and government. All five 2006 IT

Plan goals have been refined and realigned and a new goal on innovation and transformation added.

Performance

Monitoring, accountability systems have been strengthened or will be expanded. New systems are under development such as;

- e-citizens site refined
- Expand CAP metrics
- SWOT analysis conducted with agencies and leadership
- Statewide IT Survey
- MiPlan expansion and upgrade
- Create a Michigan Accountability Portal

Implementation Framework

The implementation framework builds upon existing strengths and best practices, addresses current as well as opportunity gaps, engages global issues and addresses priorities specific to Michigan.

Build Upon Existing Strengths and Best Practices

Gubernatorial leadership; CAP alignment, MiPLAN, strategic role of IT in Michigan; integrated planning process; centralized enterprise authority; cross - boundary relations; strong customer, agency and shared service relations; establish a change management process; implement basic technology assessment capabilities and sound and successful experience base.

Address Current as well as Opportunity Gaps

Address performance and investment management maturity; portfolio and project management; innovation and technology management capabilities; enterprise architecture and interoperability refinement; infrastructure consolidation; human capital management; upgrade the Michigan portal

Develop Crosscutting Principles not only to guide the development of strategies that support and bridge the IT plan goals, but also represent action steps, and help define the desired future state. These principles address two core purposes:

Ensure Core Services, Accountable Management and Performance
Sustainable Near Future

- Effective and Efficient Customer-Based Operations and Services
- Performance, Accountability and Public Value
- Privacy, Security and Public Trust
- High-Performance Workers and Workplace

Enable and drive Innovation, Change and Transformation of Government
Intermediate Future

- Agile Management and Infrastructure
- Shared Solutions, Standards and Flexible, Open Boundaries
- Maturation and Modernization of Solutions
- Innovation and Transformation

Develop Michigan IT Service and Government Transformation Map (Matrix) that identifies the dynamic roles of the principles in relationship to the goals and strategies, identifying the level of impact each principle has on each goal.

Michigan's Government Process Improvement Initiative (GPII)
Expected Benefits

- Streamline Permitting Processes
- Assure Uniform Application and Interpretation of Code
- One-stop shop for businesses
- Improve Communication between State and Businesses
- Enable Business Compliance with Rules/Regulation
- Enable Cross Agency Collaborative Thinking/Sharing
- Instill a Service versus Control Orientation
- Streamline Licensing Processes
- Institute Performance Management Practices
- Improve Communication between State and Local Government
- Clarify Brownfield Application and Certification Process
- Prioritize Technology Enhancements
- Enhance Skills Acquisition and Retention

Systematize Enabling Tools

- Develop Remaining Functional and Service Area Plans: Agency Service, Infrastructure, Workforce
- Systematize Major Solution Clusters
  - Organize strategic technologies both at the enterprise level as well as targeted to principles and goal areas.
  - Refine Michigan Technology Solutions
- Integrate Centers for Excellence: Create a Michigan Centers for Excellence Framework aligning individual Excellence and Competency Center goals, strategies, activities.
- Upgrade Accountability and Performance Tracking and Management Capabilities Metrics
  - MiPlan
  - CAP Metrics
  - Accountability Portal

Develop Innovation and Transformation Goal (Goal Six) strategies and initiatives to support two objectives, (A) achieving full digital government maturity and (B) transforming government.

Both objectives are supported by enabling strategies and initiatives, ranging from (1) back-office focused , process-centric changes and innovations to (2) front-office centered , people-centric initiatives. A number of these initiatives and processes also support IT Plan goals 1-5. See Figure 2 which illustrates Goal Six framework and selected strategies and initiatives.

Goal Area Initiative Overivew

	Process	Engagement	People
Maximizing Digital Government	• Shared Service • Shared Technology Infrastructure	• Location Aware Applications • Enterprise Mobility	• Citizen Engagement Tools • Mashups
Enabling Strategies & Initiatives	• Business Process Reengineering Center for Excellence • Enterprise Architecture Supporting Innovation and Transformation	• GAP analysis and work plan • Statewide Performance and Diagnostic Metrics • Michigan Innovation and IT Advisory Board	• Develop two-way customer needs identification process and program
Government Transformation	• Business Application Modernization (BAM)	• Align to statewide goals and objectives • Use and drive best practices • Business process reengineering	• One-stop Business Portal • 800 MHz Radio

Figure 2 – Goal Area Initiative Overview

Successfully Engage Global and National Issues

Some of the global drivers and levelers that need to be addressed include: Role of information, knowledge, intellectual capital; requirements for new customers and workers; effect of connectivity, data mining, knowledge pools on innovation; information, communications and technology and economic competition; full range of benefits and challenges of sourcing options and tradeoffs, including strengthening in-sourcing potential at the local level; flattening of hierarchies through governing by network, and others.

Address Priorities Specific to Michigan

- Cabinet Plan and Statewide Issues: Provide IT support to the Cabinet Plan and agency business plan priorities and strategies, both by strengthening existing initiatives as well as by identifying new opportunities
- Structural Challenges: Maximize strategic role of IT in Michigan, partnerships with Pew and A.T. Kearney, Inc.
- Develop Signature IT Initiatives: Provide issue assessment, solution and process design and IT support for selected flagship issue areas such as economic development, health care education.

As depicted in Figure 3, today's technology is built not only to answer technology needs but to deliver on business objectives.

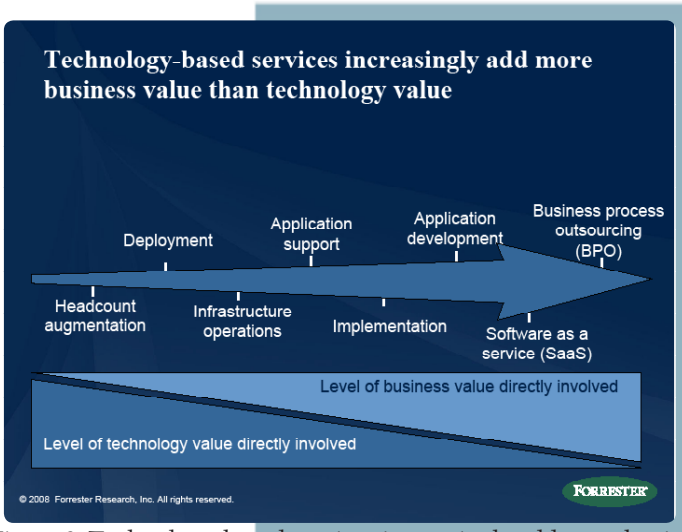


Figure 3. Technology-based services increasingly add more business value than technology value. Source: Forrester, Inc., 2008

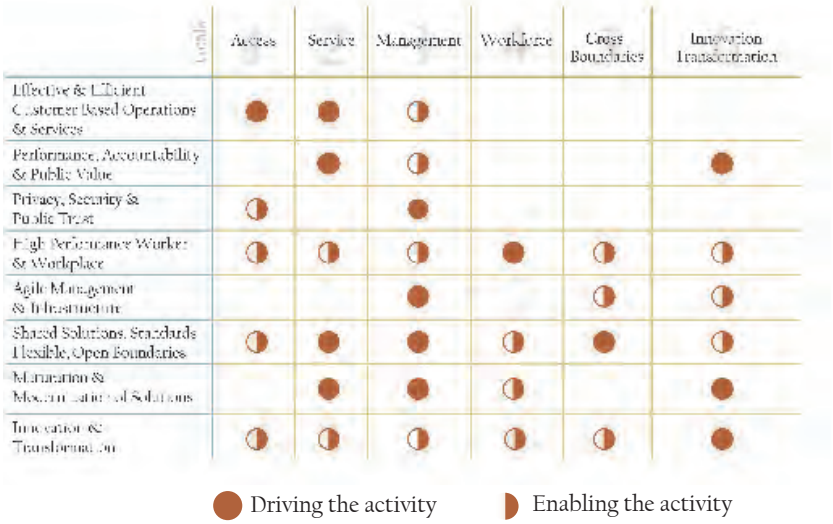
Michigan Strategy and Transformation Map

IT Service and Government Transformation

The Michigan Strategy and Transformation Map recognizes the requirements for maintaining existing commitments, need for innovation and transformation, necessity of a high performance workforce and workplace, the emergence of new values and the necessity for an agile management and infrastructure.

The strategy map is based on a framework of principles that bridge, integrate goals, strategies and initiatives and guides both the IT strategic direction as well as IT plan implementation. Each principle either supports, enables or drives a strategy or a goal area. The principles are derived from an assessment of solution and service need and demand factors, a gap analysis of the baseline and requirements for the immediate (0 to 2 years) and intermediate (3 to 5 years) future. The solution demand factors include social, economic, demographic changes as well as public policies, consumer and citizen needs, agency business requirements, available and emerging business models and technology.

Figure 4. Michigan's IT Strategy and Transformation Map



Integrating Themes

All principles enable or drive two or more of the goals, but three are fully cross-cutting, directly linking all six goals. Solutions are shared in all areas of IT responsibility, innovation is a standard and expectation for all activities and, without a high-performance workforce and workplace, the goals and strategies remain as unmet commitments. A fourth, agile management and infrastructure, is the rudder for the principles.

Agile Management

In order to actualize and implement a new, public sector business model and IT values in Michigan, an agile management must fully engage all of the principles described here. The targets under Goal Three (Appendix C) recognize the need to engage the changing values and direction of IT. Specifically, the following steps must be taken:

- Enhance the agility of technology management and infrastructure; balance the challenges of supporting or phasing-out outdated technologies with new opportunities; develop employee skills and competencies; maintain a diverse portfolio of projects to fulfill needs and tap into best practices wherever possible (2009 and Ongoing)
- Realign technology management with business process design; use of information and relationships with partners and customers to support a new, and more agile, IT decision-making; business processes, sourcing, infrastructure and service operational design (2010)
- Develop and adapt the business model, policies and principles around opportunities such as virtualization, modularization, Web and multiple service delivery options for infrastructure, information and applications (2010)

The Strategy and Transformation Map for IT Service and Government Transformation is both the last planning step and the first implementation step. These bridge principles and capabilities, in tandem, describe and enable the future of Michigan's IT. Strategies have been modified or added to better involve customers, enable and drive a high-performance workforce and workplace, create agile management processes, modernize solutions and technologies, better coordinate state agency and external sharing of services, make strategic use of information, establish innovation as a strategy and capability, and drive the transformation of services and government. Michigan's IT planning process and management will continue to anticipate the evolution of IT and further recognize that IT future is not just a technology future, it is also an information, business process and public value future.

Glossary

A-OPT	Agency Operation and Partnership Team – formed by MDIT to receive tactical and strategic input on enterprise-wide IT issues and how services can be improved. Members include 35 agency and MDIT staff.
AARP	Automated asset recovery program – usable equipment is re-deployed within the state; out-of-warranty equipment is traded on a one-for-one basis and obsolete equipment is properly salvaged by a recycling company.
ASK	Agencies Sharing Knowledge – statewide data sharing strategy and infrastructure to provide a single, consistent and accurate source of data for state agencies.
BAM	Business Application Modernization – a multi-phased project that includes re-engineering business processes and building a technical infrastructure to support the Michigan Department of State's business.
BICC	Business Intelligence Competency Center – established by MDIT to coordinate and guide data management and sharing of data to enable integrated analytics initiatives across all state agencies.
CAP	Cabinet Action Plan – a detailed plan mapping cabinet agencies' actions and outcomes aligned with the governor's statewide priorities and the executive budget. Agencies report monthly on status of outcomes and milestones to which they have committed.
CEPI	Center for Educational Performance Information – collects and reports data about the performance of Michigan K-12 public schools and students.
CHAMPS	Community Health Automated Medical Processing System – a project to re-engineer claims processing for Medicaid programs, to improve payment of claims, reduce the volume of paperwork for providers and state Medicaid staff and improve accessibility of information.
CISU	Critical Infrastructure Security Upgrade – project to provide greater protection of vital files and data and keep critical systems available to qualified users.
CMMI	Capability Maturity Model® Integration – a process improvement approach developed by the Software Engineering Institute, Carnegie Mellon University, that provides organizations with a tool for objectively assessing the ability of an organization to perform a software project.
Collaboration	Sharing and integration of data between departments to leverage information and enable quicker and more effective decisions.
Core Services	Access, Services, IT Management and Infrastructure.
EMC	Enterprise Content Manager – prepare Michigan for the challenges of new e-discovery rules, improve internal efficiency and protect employees, citizens and stakeholders rights.
Enterprise Mobility	Utilize technology to connect state employees to their work anywhere, at anytime from any place.
Forrester	Forrester Research, Inc. – an independent technology and market research company that provides proprietary research and pragmatic and forward-thinking advice to global leaders in business and technology.

Gartner	Gartner, Inc. – an information technology research and advisory company providing research and analysis on the global information technology industry and helping clients make informed technology and business decisions by providing in-depth analysis and actionable advice on virtually all aspects of technology.
GPII	Government Performance Improvement Initiative – an effort involving both private and public sector to identify State of Michigan processes viewed as needing attention and determine those most ripe for process improvement and streamlining.
GPP	Government Performance Project – a grading of the state's performance management done by Governing Magazine and the PEW Foundation every three years.
GPS	Global Positioning System – an aid to navigation worldwide and a useful tool for map making, land surveying, commerce and scientific uses. GPS also provides a precise time reference used in many applications, including scientific study of earthquakes and synchronization of telecommunications networks.
Greening IT	Increase environment awareness and adopt environmentally sustainable principles for enterprise IT facilities, equipment purchases and disposal of equipment.
HAL	Michigan Department of History, Arts and Libraries – whose mission is to enrich quality of life and strengthen the economy by providing access to information, preserving and promoting Michigan's heritage and fostering cultural creativity.
HIE	Health Information Exchange – the infrastructure and business processes allowing healthcare organizations within a community to instantly move clinical information between disparate healthcare information systems across organizations while maintaining the meaning of the information being exchanged.
HIT	Health Information Technology – the use of computer hardware and software to process health care information electronically within a healthcare organization, enabling the storage, retrieval and use of data for communication and decision making related to patient care delivery.
Intermediate Range	A time period of two to five years.
ITAM	Information Technology Asset Management – a comprehensive asset management solution that gives MDIT the ability to accurately discover, track and manage all IT assets under MDIT's control throughout their lifecycle, from within a single, central asset management data repository.
ITIL	Information Technology Infrastructure Library® – a set of concepts, best practices and techniques for managing information technology (IT) infrastructure, development, and operations gathered from the public and private sectors. It is the most widely-accepted approach to IT service management.
Kiosk	Self-service device – a computer-based terminal or display used to provide information or services, typically in a public place. Kiosk systems are being used in a variety of applications, including information directories, customer self-service terminals, electronic catalogs, internet access terminals, tourism guides and more.
MAIN	Michigan Administration Information Network – a fully integrated automated financial management system for State of Michigan.

Glossary

Mashups	Interactive Web applications that draw upon content retrieved from external data sources to create entirely new and innovation services.
MI-360	A formal review process that provides managers with an opportunity to receive feedback from their employees and to improve their management skills.
Michigan Talent Bank	State-managed, Internet-based, self-service, job search engine used by employers and job seekers.
Michigan/ 1 Desktop Migration	Consolidate and streamline the state's 19 separate, agency computing environments into a standardized enterprise framework.
MiHIN	Michigan Health Information Network – a statewide effort to facilitate and coordinate advancing the use of health information technology and HIE in Michigan's healthcare system to reduce the overall cost while increasing quality of care and patient safety.
MiTAPS	Michigan Timely Application and Permit Server – one-stop shop for online application for Michigan business permits, allowing the business to track application processing and pay fees online.
MIITAS	Michigan Integrated Tax Administration System – a project to improve the efficiency, in both tax processing and tax administration, of the system that manages tax-related revenue for the State of Michigan.
MITEC	Michigan Information Technology Executive Council – the advisory body for the state CIO in the planning, development, implementation and management of state government-wide, as well as department, IT services and solutions. Members include high-level administrators from each client agency and representatives of the legislative and judicial branches.
MMIS	Medicaid Management Information System – a project providing the ability to make enhancements and changes requested by federal and state governments in a timely matter to retain required federal certification.
MPSCS	Michigan Public Safety Communication System – a statewide radio system providing inter-and intra-agency interoperability between state, local and federal public safety agencies to ensure rapid response and coordination of emergency personnel.
PCI	Payment Card Industry – collectively defines the debit, credit, pre-paid, e-purse, ATM, POS and overall payment industry.
RFID	Radio Frequency Identification – automatic identification method, relying on storing and remotely retrieving data using devices called RFID tags or transponders.
RSS	Really simple syndication – feeds and video streamline to distribute content to engage and inform citizens of Michigan.
Short Range	A time period of less than two years.
SMT	Strategic Management Team – as part of MDIT's governance model, the SMT defines the vision for MDIT and sets concrete deliverables for the Strategic Plan. It is comprised of senior IT managers.
SOA	Service-Oriented Architecture – the software infrastructure and tools to build, configure, deploy, monitor and manage services.

Student Internship Program	A program that reaches out to universities and community colleges around the state to recruit students to work in state government and gain experience while earning credits from their university or college.
SUITE	State Unified Information Technology Environment – developed to standardize methodologies, procedures, training and tools for projects and systems development lifecycle management throughout MDIT.
Teradata	Proprietary parallel processing system running a shared architecture and used by MDIT's enterprise Teradata warehouse.
Teradata Warehouse	Centralized EMC Disk array for database storage sharing over 2 terabits of information between 5 state agencies and used to support their decision making and business processes.
UIC	Unique Identification Code – employed by CEPI to safeguard shared educational history for each student as required by law.

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